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执行蒙特利尔议定书  
多边基金执行委员会  
第八十次会议  
2017年11月13日至17日，蒙特利尔

开发计划署 2017 年工作计划修正案

## 基金秘书处的评论和建议

1. 开发计划署正在向执行委员会申请为表 1 所列 2017 年工作计划核准费用 2,927,195 美元，加上机构支助费用 233,864 美元。提交的申请附于本文件后。

表 1:开发计划署 2017 年工作计划修正案

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
<b>A 部分: 建议一揽子核准的活动</b>			
<b>A1:体制建设项目更新</b>			
哥斯达黎加	延长体制建设项目 (第七阶段)	179,857	179,857
印度尼西亚	延长体制建设项目 (第六阶段)	347,194	347,194
马来西亚	延长体制建设项目 (第七阶段)	357,760	357,760
巴拿马	延长体制建设项目 (第八阶段)	191,360	191,360
乌干达	延长体制建设项目 (第七阶段)	193,024	193,024
A1 小计		1,269,195	1,269,195
A1 机构支助费用 (7%用于体制建设)		88,844	88,844
A1 合计		1,358,039	1,358,039
<b>B 部分:建议个别审议的活动</b>			
<b>B1:为促进活动提供技术援助 (决定第 79/46 号)</b>			
智利 <sup>1</sup>	淘汰 HFC 的促进活动	33,000	*
中国 <sup>2</sup>	淘汰 HFC 的促进活动	165,000	*
哥伦比亚	淘汰 HFC 的促进活动	250,000	*
哥斯达黎加	淘汰 HFC 的促进活动	150,000	*
斐济	淘汰 HFC 的促进活动	150,000	*
牙买加	淘汰 HFC 的促进活动	150,000	*
黎巴嫩	淘汰 HFC 的促进活动	150,000	*
秘鲁	淘汰 HFC 的促进活动	150,000	*
特立尼达和多巴哥	淘汰 HFC 的促进活动	150,000	*
乌干达 <sup>3</sup>	淘汰 HFC 的促进活动	100,000	*
B1 小计		1,448,000	*
机构支助费用 (9%用于技术援助)		130,320	*
B1 小计		1,578,320	*
<b>B2: HFC 相关项目的项目编制 (决定 78/3 (g) 和 79/45)</b>			
中国	空调生产线优化, 从 HFC-134a 转化为 HFO-1234yf 作为移动空调制造商制冷剂	30,000	*
中国	在家用冰箱制造商中, 从 HFC-245fa 转化为环戊烷加 HFO (C5 + HFO)	30,000	*
中国	冷冻机制造商 (青岛海尔) 从 HFC-134a 转向 HC-290	30,000	*
多米尼加共和国	在 Farco 制造独立的自含商用冰箱中, 将 HFC-134a 转换为 HC-290	30,000	*
埃及	在制造聚氨酯/浇注到位和喷雾泡沫中, 从 HFC-134a 转变为 HFO-1234ze 和其他液体 HFO	30,000	*
津巴布韦	在卡普里岛生产家用冰箱中, 从 HFC-134a 转为 R-600a	30,000	*
B2 小计		180,000	*
机构支助费用 (9%用于项目编制)		12,600	*
B2 合计		192,600	*

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
<b>B3: HFC-23 副产品减少或转换示范项目的项目编制 (决定 79/47)</b>			
中国	为聊城富尔新材料科技有限公司, 用氢气和二氧化碳反应将 HFC-23 副产品转化为有价值的有机卤化物的示范项目	30,000	*
B2 小计		30,000	
机构支助费用 (7%用于项目编制)		2,100	*
B3 合计		32,100	*
总计 (A1, B1, B2,B3)		3,161,059	1,358,039

\*供个别考虑

<sup>1</sup> 环境规划署和工发组织作为合作机构

<sup>2</sup> 环境署作为合作机构

<sup>3</sup> 工发组织合作机构

## A 部分: 建议一揽子核准的活动

### A1: 体制建设

#### 项目说明

2. 开发规划署提交了为表 1 所列的国家提出延长体制建设项目的申请。这些项目的说明载于本文件附件一。

#### 秘书处的评论

3. 秘书处审查了开发计划署代表相关国家根据有关资格及供资额的准则和有关决定提出五项延长体制建设的申请。根据前一阶段体制建设的原来工作计划及绩效指标、国家方案和第 7 条数据、关于氟氯烃淘汰管理计划执行情况的最新报告、相关机构的工作进度报告和缔约方会议的任何相关决定, 对这些申请进行了交叉核对。秘书处注意到, 这些国家都遵守了《蒙特利尔议定书》关于淘汰消耗臭氧层物质的目标, 它们的年度消费量没有超过各自与执行委员会的协议所表明的最高允许年度消费量。并且提交的所有申请都依照第 74/51 (e) 号决定, 提出了体制建设下一阶段计划活动的绩效指标

#### 秘书处的建议

4. 秘书处建议按本文件表 1 所列供资数额一揽子核准哥斯达黎加、印度尼西亚、马来西亚、巴拿马和乌拉圭的延长体制建设的申请。谨请执行委员会向上述政府提出本文件附件二所作的评论。

## B部分:建议个别审议

### B1: 促进活动的技术援助（决定 79/46）

#### 背景

5. 根据第 79/46 号决定<sup>1</sup>，开发计划署提交了在表 1 所列 10 个第 5 条国家执行促进性活动的资金申请。详细建议载于开发计划署提交的附件二。

6. 十个国家提出的促进活动包括以下内容：

- (a) 促进利益攸关方的协调，以支持早日批准“基加利修正案”，并提高对于淘汰 HFC 和能源效率改进方案的认识；
- (b) 替代办法的能力建设和培训，向国家臭氧机构、政府利益攸关方、维修部门和最终用户提供培训，以明确“基加利修正案”的责任；修改促进淘汰 HFC 的现有法规和创建新的法规的必要性；并开展培训以解决安装新的或更新现有 RAC 系统的能源效率挑战；
- (c) 第 4B 条许可和报告，为建立氢氟碳化合物和氢氟碳化合物替代品的进出口许可证制度，制定所需的管理方案，包括审查与收集和核查消耗臭氧层物质数据有关的方法，以包含氢氟碳化合物和替代品；和
- (d) 拟订一项批准和执行“基加利修正案”的国家战略，特别包括政策、体制和管理框架、氢氟碳化合物的生产和消费、行业状况和分析、估计基准以及氢氟碳化合物的增长预测、与氟氯烃淘汰的联系，并确定氟氯烃淘汰的优先领域。

#### 秘书处的评论

7. 为便于准备和提交有关促进活动的申请，秘书处编写了一份关于淘汰氟化碳淘汰活动的促进活动的指南，并在机构间协调会议<sup>2</sup>上提交给双边和执行机构。秘书处指出，开发计划署提交的有关促进活动的申请遵循了“指南”。

8. 根据第 79/46 号决定，德国和意大利政府（双边机构）和四个执行机构都代表 59 个第 5 条国家提出了为促进活动提供供资的申请。在决定（e）分段中，委员会决定，尽可能从非第 5 条缔约方提供的额外自愿捐款中，向第 80 届会议提交的促进活动申请供资。为方便委员会成员的审议和讨论，考虑到第 79/46（e）号决定中商定的供资方式，秘书处列出了提交给第 80 届会议的有关促进活动的所有申请清单，表明了所涉及的供资水平和机构，见项目审查期间确定的问题概览文件。<sup>3</sup>

9. 秘书处审查了有关促进活动的申请，并得出结论认为，它们均符合第 79/46 号决定的所有要求，如下所述：

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<sup>1</sup>执行委员会决定，除其他外，批准促进活动，根据是各国可以有灵活性来进行一系列活动，以履行符合“基加利修正案”的初始义务；促进活动可以包括但不限于：促进和支持早日批准“基加利修正案”的活动；启动支持体制安排；审查许可证制度；关于氢氟碳化合物的数据报告；及非投资活动示范。

<sup>2</sup>蒙特利尔，2017 年 9 月 5-7 日。双边和执行机构赞赏指南的制订。

<sup>3</sup> UNEP/OzL.Pro/ExCom/80/22。

- (a) 开发计划署提交了十个第 5 条国家政府表示打算尽最大努力尽早批准“基加利修正案”的赞同意见书；
- (b) 十项项目提案包括对各项促进活动、体制安排、费用细目和执行时间表的详细说明；和
- (c) 所有建议均将在 18 个月内执行。

### 秘书处的建议

10. 谨请执行委员会考虑，在讨论与项目审查期间确定的问题概览的文件 UNEP/OzL.Pro/ExCom/80/22) 所述的与氢氟碳化合物相关的提案时，为上文表 1 所列十个第 5 条国家的淘汰 HFC 的促进活动申请。

### B2: HFC 相关项目的项目编制（决定 78/3 (g) 和 79/45）

#### 项目说明

11. 开发计划署提交了六个项目编制申请，要求在四个国家（三个项目为中国，其中多米尼加共和国，埃及和津巴布韦各为一个）的制造业中将氢氟碳化合物转换为基于氢氟烷烃或其他低全球升温潜能值的制冷剂，见表 1。项目编制申请的细节载于开发计划署提案的附件 3。

#### 秘书处的评论

12. 德国政府（作为双边机构）和三个执行机构，为 10 个第 5 条国家行业消费量的氢氟碳化合物淘汰投资项目，以及为阿根廷<sup>4</sup>、孟加拉国<sup>5</sup>、哥伦比亚<sup>6</sup>和墨西哥<sup>7</sup>淘汰 HFC-134a 的四个（正式制定）投资项目，根据第 78/3 号<sup>8</sup>和第 79/45 号<sup>9</sup>决定，提交了编制供资的申请。执行委员会需要考虑提交给第 80 届会议的所有与氢氟碳化合物有关的项目提案，注意到其选择标准（即提出的技术，提案的可复制性和地域分配）及其供资方式（即尽可能从非第 5 条缔约方提供的额外自愿捐款，优先考虑促进活动<sup>10</sup>）。为方便委员会成员的审议和讨论，秘书处列入了提交给第 80 届会议的与氢氟碳化合物有关的项目提案的清单，其中列出了简要说明、选择的技术、有关“项目审查期间确定的问题概览”文件涉及的供资水平和结构。<sup>11</sup>

<sup>4</sup> UNEP/OzL.Pro/ExCom/80/30。

<sup>5</sup> UNEP/OzL.Pro/ExCom/80/32。

<sup>6</sup> UNEP/OzL.Pro/ExCom/80/38。

<sup>7</sup> UNEP/OzL.Pro/ExCom/80/45。

<sup>8</sup> 执行委员会决定特别考虑核准仅在制造业的数量有限的 HFC-相关项目，以允许委员会在可能有关淘汰氢氟碳化合物的增量资本和运营成本方面获得经验，其谅解是：提交项目的国家应该已经批准了“基加利修正案”，或者提交了正式函件，表明政府打算批准修正案；只有批准书交存纽约联合国之后才能获得进一步的资金；而且由于项目促成减少的任何数量的氢氟碳化合物都将从起点扣除。

<sup>9</sup> 执行委员会特别重申决定 78/3(g)并决定以下标准来考虑 HFC-相关的项目提案：有关项目应该位于决定转换为成熟技术的各个单一企业，对国家或地区或行业应具备广泛的可复制性，并应考虑到地理分布；项目必须在两年以内全面执行。项目完成报告应详尽全面地提供合格的增量资本成本，增量运营成本，转换期间可能产生的任何节省费用以及促进执行的相关因素。

<sup>10</sup> 决定 79/45(d)。

<sup>11</sup> UNEP/OzL.Pro/ExCom/80/22。

13. 关于六个氢氟碳化物淘汰项目的项目编制要求，秘书处指出，提案符合第 78/3 号和第 79/45 号决定的所有要求，并符合有关项目编制供资的有关决定。

### 秘书处的建议

14. 谨请执行委员会考虑，在讨论与项目审查期间确定的问题概览的文件 UNEP/OzL.Pro/ExCom/80/22) 所述的与氢氟碳化合物相关的提案时，为上文表 1 所列中国、多米尼加共和国、埃及和津巴布韦的制造业从 HFC 转换为基于 HFO 或其它低全球升温潜能值的替代品的项目编制申请。

### **B3: HFC-23 副产品减少或转换示范项目的项目编制（决定 79/47）**

#### 项目说明

15. 按照决定 79/47 (g)，开发计划署提交了中国聊城富尔新材料科技有限公司 HFC-23 副产品转化示范项目的项目编制的供资申请，见表 1。项目编制申请的细节载于开发计划署提案的附件三。

### 秘书处的评论

16. 秘书处指出，HFC-23 副产品转换技术示范项目的项目编制申请符合有关项目编制供资的相关决定，并载有足够的细节，可以审议这一申请。

17. 秘书处正在征询执行委员会关于这一申请供资来源的意见，并指出在第 79/47 号决定 (g) 中，为 HFC-23 排放量控制的示范项目的供资申请将提交给第 81 届会议，非第 5 条缔约方提供的额外自愿捐款用于促进活动（作为优先事项），其次用于与行业消费与氟氯烃有关的投资项目。

### 秘书处的建议

18. 谨请执行委员会根据秘书处的评论，考虑中国聊城富尔新材料科技有限公司用氢气和二氧化碳反应将 HFC-23 副产品转化为有价值的有机卤化物的技术示范项目的项目编制的供资申请。

Annex I

INSTITUTIONAL STRENGTHENING PROJECT PROPOSALS

Costa Rica: Renewal of institutional strengthening

Summary of the project and country profile		UNDP
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Oct-92	213,160
Phase II:	Feb-97	108,087
Phase III:	Mar-99	108,087
Phase IV:	Dec-01	108,087
Phase V:	Dec-03	140,513
Phase VI:	Nov-05	140,513
Phase VII:	Nov-07	140,513
Phase VIII:	Nov-09	140,513
Phase IX:	Nov-11	140,514
Phase X:	Dec-13	140,513
Phase XI:	Nov-15	179,857
Total:		1,560,357
Amount requested for renewal (phase XII) (US \$):		179,857
Amount recommended for approval for phase XII (US \$):		179,857
Agency support costs (US \$):		12,590
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		192,447
Date of approval of country programme:		1992
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		14.1
Annex E (methyl bromide) (average 1995-1998)		342.5
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		10.89
Annex E (methyl bromide)		0.0
Total:		10.89
Year of reported country programme implementation data:		2016
Amount approved for projects (as at July 2017) (US \$):		11,566,101
Amount disbursed (as at December 2016) (US \$):		10,817,653
ODS to be phased out (as at July 2017) (ODP tonnes):		805.9
ODS phased out (as at December 2016) (ODP tonnes):		794.5

1. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	7,527,504
(b) Institutional strengthening:	1,560,357
(c) Project preparation, technical assistance, training and other non-investment projects:	2,478,240
Total:	11,566,101

Progress report

2. Phase XI of the IS project for Costa Rica was implemented by the Ozone Technical Office (OTO) attached to the Directorate of Environmental Quality Management (DIGECA) of the Ministry of Environment and Energy (MINAE). The country controlled the import and export of HCFCs and HFC refrigerants through an online system. Imports and exports of ODS and ODS-based equipment were monitored and controlled in coordination with “Procomer”, the agency in charge of exports, and the Directorate General of Customs. The establishment of an HFC licensing system improved the ability to track those substances. Costa Rica reported country programme data in advance of the 1 May deadline, and participated in regional network and international meetings. The country promoted awareness of ozone layer protection matters and the OTO also initiated the preparation of online course on protection of the ozone layer for teachers. Costa Rica submitted its ODS alternatives survey, and the fourth tranche of the HPMP to the 80<sup>th</sup> meeting and achieved the targets set in the performance indicators.

Plan of action

3. During phase XII of the IS project the OTO will continue to control imports of HCFC and their alternatives and equipment containing them in order to continue the phase-out of HCFCs and will also focus on completing the process to ratify the Kigali Amendment. Other activities will include: country programme and Article 7 data reporting; training of fiscal police to identify illegal imports; assessing the viability of a system to automatically capture ODS import data from “Procomer”; meetings of the steering committee to monitor the progress of Montreal Protocol activities; dissemination of information on the Kigali Amendment; coordination of HPMP activities; training and sensitizing of importers and consumers of refrigeration and air-conditioning (RAC) equipment; and, awareness raising. The online course for teachers on protection of the ozone layer will be completed.

**Indonesia: Renewal of institutional strengthening**

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Jun-93	314,780
Phase II:	Nov-97	208,650
Phase III:	Dec-00	208,650
Phase IV:	Dec-03	271,245
Phase V:	Nov-05	271,245
Phase VI:	Nov-07	271,245
Phase VII:	Nov-09	271,246
Phase VIII:	Nov-11	271,246
Phase IX:	Dec-13	271,246
Phase X:	Nov-15	347,194
	Total:	2,706,747
Amount requested for renewal (phase XI) (US \$):		347,194
Amount recommended for approval for phase XI (US \$):		347,194
Agency support costs (US \$):		24,304
Total cost of institutional strengthening phase XI to the Multilateral Fund (US \$):		371,497
Date of approval of country programme:		1994
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		13.3
Annex C, Group I (HCFCs) (average 2009-2010)		403.9
Annex E (methyl bromide) (average 1995-1998)		40.7



<b>Summary of the project and country profile</b>	
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:	
Annex B, Group III (methyl chloroform)	0.0
Annex C, Group I (HCFCs)	244.66
Annex E (methyl bromide)	0.0
<b>Total:</b>	<b>244.66</b>
Year of reported country programme implementation data:	2016
Amount approved for projects (as at July 2017) (US \$):	79,440,243
Amount disbursed (as at December 2016) (US \$):	63,837,076
ODS to be phased out (as at July 2017) (ODP tonnes):	10,436.0
ODS phased out (as at December 2016) (ODP tonnes):	10,635.3

4. Summary of activities and funds approved by the Executive Committee:

<b>Summary of activities</b>	<b>Funds approved (US \$)</b>
(a) Investment projects:	67,116,170
(b) Institutional strengthening:	2,706,747
(c) Project preparation, technical assistance, training and other non-investment projects:	9,617,326
<b>Total:</b>	<b>79,440,243</b>

Progress report

5. The country took measures to support the implementation of legislation to control and monitor HCFCs, customs officers' training, the development and launch of an innovative Android-based application for monitoring refrigerants in 24 provinces. The NOU prioritized enforcement and monitoring activities to ensure compliance with the Protocol, and coordination with stakeholders to implement the HPMP, and submitted country programme and Article 7 data to the Fund and Ozone Secretariats, respectively. Products were developed and distributed to raise awareness of ozone protection. Of the five performance indicators set by the NOU, targets for four were fully achieved and one related to the timely submission of country programme data was partially achieved.

Plan of action

6. Funds from phase XI of the IS project will provide support for completion of stage I of the HPMP and implementation of stage II through enforcement of policies, strategies, control measures, technical assistance and monitoring mechanisms, cooperation with stakeholders, and public awareness. Phase XI will also support the implementation of enabling activities for the Kigali Amendment thereby preparing the country for HFC phase-down. The NOU will ensure the timely submission of relevant data to the Fund and Ozone Secretariats and participate in regional network meetings, and Montreal Protocol meetings.

**Malaysia: Renewal of institutional strengthening**

<b>Summary of the project and country profile</b>		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Mar-93	322,520
Phase II:	Oct-96	215,000
Phase III:	Nov-98	215,000
Phase IV:	Dec-00	215,000
Phase V:	Nov-02	279,500
Phase VI:	Dec-04	279,500
Phase VII:	Nov-07	279,500

Summary of the project and country profile			
	Phase VIII:	Jul-09	279,500
	Phase IX:	Jul-11	279,500
	Phase X:	Jul-13	279,500
	Phase XI:	Nov-15	357,760
		Total:	3,002,280
Amount requested for renewal (phase XII) (US \$):			357,760
Amount recommended for approval for phase XII (US \$):			357,760
Agency support costs (US \$):			25,043
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):			382,803
Date of approval of country programme:			1992
Date of approval of HCFC phase-out management plan:			2011
Baseline consumption of controlled substances (ODP tonnes):			
Annex B, Group III (methyl chloroform) (average 1998-2000)			49.05
Annex C, Group I (HCFCs) (average 2009-2010)			515.8
Annex E (methyl bromide) (average 1995-1998)			14.6
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:			
Annex B, Group III (methyl chloroform)			0.0
Annex C, Group I (HCFCs)			318.62
Annex E (methyl bromide)			0.0
			Total:
			318.62
Year of reported country programme implementation data:			2016
Amount approved for projects (as at July 2017) (US \$):			63,158,498
Amount disbursed (as at December 2016) (US \$):			54,965,140
ODS to be phased out (as at July 2017) (ODP tonnes):			6,983.6
ODS phased out (as at December 2016) (ODP tonnes):			6,778.7

7. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	51,936,820
(b) Institutional strengthening:	3,002,280
(c) Project preparation, technical assistance, training and other non-investment projects:	8,219,398
Total:	63,158,498

Progress report

8. Malaysia managed and monitored activities to sustain ODS phase-out and ensure compliance with the Protocol. The NOU worked closely with other national agencies and stakeholders to ensure monitoring of ODS phase-out and implemented activities for awareness and training of stakeholders. The NOU is in the process of completing the remaining activities under stage I of the HPMP and has initiated activities under stage II that was approved in November 2016. Malaysia participated in regional network meetings. The targets of all six performance indicators set by the NOU were fully achieved.

Plan of action

9. Malaysia will focus on coordination of three major activities: completion of stage I of the HPMP, implementation of stage II, and preparations for HFC phase-down. Malaysia will continue implementation of ODS phase-out activities through enforcement of policies, strategies, control measures, technical assistance and monitoring mechanisms. The IS project will support monitoring activities under stage II including the investment project in the foam sector, technical assistance in the RAC sector, and regulations and measures to control HCFC consumption. The country also plans to initiate enabling activities for ratification of the Kigali Amendment.

## Panama: Renewal of institutional strengthening

Summary of the project and country profile		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
Phase I:	Jul-93	172,500
Phase II:	Jul-00	115,000
Phase III:	Nov-02	149,500
Phase IV:	Dec-04	149,500
Phase V:	Nov-11	149,500
Phase VI:	Dec-13	149,500
Phase VII:	Nov-15	191,360
	Total:	1,076,860
Amount requested for renewal (phase VIII) (US \$):		191,360
Amount recommended for approval for phase VIII (US \$):		191,360
Agency support costs (US \$):		13,395
Total cost of institutional strengthening phase VIII to the Multilateral Fund (US \$):		204,755
Date of approval of country programme:		1993
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		24.8
Annex E (methyl bromide) (average 1995-1998)		0.0
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		18.35
Annex E (methyl bromide)		0.0
	Total:	18.35
Year of reported country programme implementation data:		2016
Amount approved for projects (as at July 2017) (US \$):		4,321,618
Amount disbursed (as at December 2016) (US \$):		3,335,305
ODS to be phased out (as at July 2017) (ODP tonnes):		245.0
ODS phased out (as at December 2016) (ODP tonnes):		241.6

### 10. Summary of activities and funds approved by the Executive Committee:

Summary of activities	Funds approved (US \$)
(a) Investment projects:	1,820,993
(b) Institutional strengthening:	1,076,860
(c) Project preparation, technical assistance, training and other non-investment projects:	1,423,765
Total:	4,321,618

### Progress report

11. Panama increased its capacity to facilitate implementation of all Montreal Protocol related projects. The NOU, which is part of the Ministry of Health, managed activities to ensure the country's compliance with the Montreal Protocol and sustain ODS phase-out. The HCFC quota system gave the NOU quick access to reliable data on ODS import and export. Import measures were enforced through strengthening the coordination and exchange of information with the National Customs Authority and monitoring procedures to prevent irregularities in the ODS trade. Stage I of the HPMP was completed in 2016 and activities in stage II were initiated despite a delay due to administrative procedures. Sound reporting systems are in place and the NOU has ensured synergies between the activities of relevant stakeholders. Training, information dissemination and awareness activities increased the competencies of custom officers

and other governmental officials, refrigerant importers, RAC technicians, primary and high school teachers, and children. The NOU concluded the final report of the national ODS alternatives survey. Panama set 12 performance indicators, all of which were fully achieved. Panama participated in regional and international meetings of the Montreal Protocol. With regard to the Kigali Amendment, the NOU began to strengthen links with the Ministry of Environment, National Energy Secretariat, Ministry of Commerce and Industries, and Panama Fire Department. It has also been working closely with Ministry of Foreign Affairs, with a view to obtaining the approval by the Executive Body and the General Assembly of Deputies for the ratification of the Kigali Amendment.

#### Plan of action

12. Panama will continue its efforts to fulfill its obligations under the Montreal Protocol and will focus on a series of activities including: ensuring the sustainability of the phase-out and compliance with the Protocol's control measures; strengthening of legislation; supporting industry and commerce to adopt ODS alternative substances and technologies; maintaining public awareness activities, especially those targeting illegal ODS trade; timely submission of data reports to the Fund and Ozone Secretariats; and attendance at Montreal Protocol meetings. The NOU will coordinate and monitor the implementation of stage II of the HPMP including projects in the foam and RAC servicing sectors, and the regulations and measures to control HCFC consumption. Panama aims to ratify the Kigali Amendment by the end of 2018.

#### **Uruguay: Renewal of institutional strengthening**

<b>Summary of the project and country profile</b>		
Implementing agency:		UNDP
Amounts previously approved for institutional strengthening (US \$):		
	Jun-93 & May-96	
Phase I:		202,800
Phase II:	Oct-96	116,000
Phase III:	Jul-98	116,000
Phase IV:	Jul-00	116,000
Phase V:	Jul-02	150,800
Phase VI:	Jul-04	150,800
Phase VII:	Jul-06	150,800
Phase VIII:	Nov-08	150,800
Phase IX:	Nov-11	150,800
Phase X:	Dec-13	150,800
Phase XI:	Nov-15	193,024
	Total:	1,648,624
Amount requested for renewal (phase XII) (US \$):		193,024
Amount recommended for approval for phase XII (US \$):		193,024
Agency support costs (US \$):		13,512
Total cost of institutional strengthening phase XII to the Multilateral Fund (US \$):		206,536
Date of approval of country programme:		1993
Date of approval of HCFC phase-out management plan:		2011
Baseline consumption of controlled substances (ODP tonnes):		
Annex B, Group III (methyl chloroform) (average 1998-2000)		0.0
Annex C, Group I (HCFCs) (average 2009-2010)		23.4
Annex E (methyl bromide) (average 1995-1998)		11.2
Latest reported ODS consumption (2016) (ODP tonnes) as per Article 7:		
Annex B, Group III (methyl chloroform)		0.0
Annex C, Group I (HCFCs)		16.43
Annex E (methyl bromide)		0.0
Total:		16.43

<b>Summary of the project and country profile</b>	
Year of reported country programme implementation data:	2016
Amount approved for projects (as at July 2017) (US \$):	8,261,541
Amount disbursed (as at December 2016) (US \$):	6,944,117
ODS to be phased out (as at July 2017) (ODP tonnes):	527.6
ODS phased out (as at December 2016) (ODP tonnes):	444.6

13. Summary of activities and funds approved by the Executive Committee:

<b>Summary of activities</b>	<b>Funds approved (US \$)</b>
(a) Investment projects:	4,098,144
(b) Institutional strengthening:	1,648,624
(c) Project preparation, technical assistance, training and other non-investment projects:	2,514,773
Total:	8,261,541

Progress report

14. The NOU continued implementation of the quota system which helped to maintain HCFC imports below the HPMP reduction targets. Data gathering measures implemented by the NOU provided complete and reliable information on imports of HCFC and HCFC-based equipment. The NOU maintained good communication with stakeholders, and reported 2015 and 2016 country programme data in advance of the 1 May deadline. The NOU coordinated the completion of stage I of the HPMP, initiated the implementation of stage II, and submitted the report on the ODS alternative survey. The country participated in all regional and international Montreal Protocol meetings. The ministerial authorities agreed to initiate the process to ratify the Kigali Amendment. Uruguay achieved the targets in the 14 performance indicators that were set in the work plan of phase XI of the IS project.

Plan of action

15. The Legal Office of the Ministry of Housing, Land Planning and Environment is expected to provide additional professional staff support to the NOU to strengthen the legal framework. Resources from stage II of the HPMP will be used to support the IS project in terms of technical training and revision and strengthening of the legal framework. The NOU will work with public and private entities to enforce HCFC consumption control measures and coordinate activities including investment projects, a training programme on good refrigeration practices, and continuous public awareness activities. The country will initiate the internal process for the ratification of the Kigali Amendment. Uruguay will continue to participate in regional network and international Montreal Protocol meetings.



## 附件二

### 执行委员会对提交给第八十次会议的延长体制建设项目的意见草案

#### 哥斯达黎加

1. 执行委员会审查了哥斯达黎加体制建设项目申请而提交的报告（第十二阶段），并赞赏地注意到该国向臭氧秘书处报告的 2015 年和 2016 年数据，表明哥斯达黎加遵照了《蒙特利尔议定书》，并在截止日 5 月 1 日之前向基金秘书处报告了国家方案执行情况。委员会还赞赏地注意到哥斯达黎加进行了筹备活动，以促进执行“基加利（Kigali）修正案”，包括早日建立氢氟碳化合物许可证制度。执行委员会认识到哥斯达黎加政府为执行其“蒙特利尔议定书”活动所作的努力，因此希望在未来两年内，政府将继续成功执行氟氯烃淘汰管理计划第二阶段和体制建设项目，以在 2020 年 1 月 1 日之前，实现《蒙特利尔议定书》要求的氟氯烃消费量减少 35%。

#### 印度尼西亚

2. 执行委员会审查了印度尼西亚体制建设项目（第十一阶段）申请提交的报告，并赞赏地注意到政府通过各种政策和管理活动以及提高认识活动来努力监测和控制消耗臭氧层物质的淘汰情况。执行委员会还注意到政府与国家机构和利益攸关方协调管理和监测氟氯烃淘汰管理计划的执行情况。执行委员会希望，在体制建设项目的第十一阶段，印度尼西亚政府将继续执行氟氯烃淘汰管理计划第二阶段和体制建设项目，以使该国将于 2020 年 1 月 1 日之前能够使氟氯烃消费量达到《蒙特利尔议定书》要求的减少 35%，并将开展活动以协助该国批准“基加利修正案”。

#### 马来西亚

3. 执行委员会审查了马来西亚体制建设项目（第十二阶段）申请而提交的报告，并赞赏地注意到马来西亚已提交 2016 年第 7 条数据，表明该国遵照了《蒙特利尔议定书》。执行委员会还指出，作为氟氯烃淘汰管理计划第一阶段，马来西亚政府已采取有效步骤，淘汰消耗臭氧层物质消费量，包括通过许可证和配额制度执行氟氯烃进口管制，泡沫塑料行业淘汰氟氯烃，以及利益攸关方的提高认识和培训，并启动了第二阶段的活动。执行委员会承认马来西亚政府的努力，因此希望在未来两年内，政府将继续成功执行氟氯烃淘汰管理计划第二阶段和体制建设项目活动。

#### 巴拿马

4. 执行委员会审查了为巴拿马体制建设项目（第八阶段）申请提交的报告，并赞赏地注意到巴拿马政府报告了第 7 条数据，表明该国遵守了《蒙特利尔议定书》，该国报告在规定的期限之前，向基金秘书处提交了国家方案执行数据。执行委员会还指出巴拿马已采取步骤淘汰消耗臭氧层物质消费量，特别是通过许可证和配额制度执行了氟氯烃进口管制，培训海关官员和制冷技术人员。执行委员会还赞赏地注意到有助于执行“基加利修正”的准备活动。执行委员会承认巴拿马政府的努力，因此希望在未来两年内，政府将继续执行氟氯烃淘汰管理计划第二阶段和体制建设项目活动，以在 2020 年 1 月 1 日前实现《蒙特利尔议定书》要求的氟氯烃消费量的 35% 削减。

#### 乌拉圭

5. 执行委员会审查了乌拉圭体制建设项目（第十二期）申请而提交的报告，并赞赏地注意到该国向臭氧秘书处报告了 2015 年和 2016 年的数据，表明该国遵照了《蒙特利尔议定书》，并向基金秘书处提供 2015 年和 2016 年国家方案执行数据。执行委员会还指出，乌拉圭政府正在通过许可证和配额制度执行氟氯烃进口管制，并在国家臭氧机构、海关当局和其他地方当局之间建立

沟通渠道。委员会赞赏地注意到开始了氟氯烃淘汰管理计划第二阶段和促进执行“基加利修正”的准备活动。执行委员会认识到乌拉圭政府的努力，因此希望在未来两年内，政府将继续成功执行氟氯烃淘汰管理计划第二阶段和体制建设项目活动，以在 2020 年 1 月 1 日之前，实现《蒙特利尔议定书》要求的氟氯烃消费量的 35% 减少。

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Empowered lives.  
Resilient nations.

**80<sup>th</sup> Meeting of the Executive Committee of the Multilateral Fund  
for the Implementation of the Montreal Protocol**

***(13 – 17 November 2017)***

**UNDP  
2017 WORK PROGRAMME AMENDMENT**

## 2017 WORK PROGRAMME AMENDMENT

### I. EXECUTIVE SUMMARY

The present document constitutes UNDP's 2017 Work Programme Amendment and is being submitted for consideration of the Executive Committee (ExCom) at its 80<sup>th</sup> Meeting. The list of submissions for all funding requests (including investment projects) that will be submitted by UNDP to the 80<sup>th</sup> ExCom meeting in Annex 1 to this document is provided for information. Project documentation such as multi-year agreements (MYA) tranche requests, investment and demonstration projects and other individual/investment proposals, are not included in this document and are submitted separately as per normal practice. Only the following (non-investment) submissions are part of this document.

### II. FUNDING REQUESTS PART OF THE WORK PROGRAMME

#### Institutional Strengthening Extensions

Requests for funding of extensions of institutional strengthening projects included in this document for submission at the 80<sup>th</sup> ExCom Meeting are tabulated below. The documents with terminal reports and requests for extension of IS funding are being submitted separately.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	24	179,857	12,590	192,447
Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	24	347,194	24,304	371,498
Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	24	357,760	25,043	382,803
Panama	INS	Institutional Strengthening Renewal (Phase VIII)	24	191,360	13,395	204,755
Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	24	193,024	13,512	206,536
<b>Total (5 requests)</b>				<b>1,269,195</b>	<b>88,844</b>	<b>1,358,039</b>

#### Requests for enabling activities

UNDP is submitting 10 requests for enabling activities as per the table below. The associated requests are included in Annex 2.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	TAS	Enabling activities for Kigali Amendment	18	33,000	2,970	35,970
China	TAS	Enabling activities for Kigali Amendment	18	165,000	14,850	179,850
Colombia	TAS	Enabling activities for Kigali Amendment	18	250,000	22,500	272,500
Costa Rica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Fiji	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Jamaica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Lebanon	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Peru	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Uruguay	TAS	Enabling activities for Kigali Amendment	18	100,000	9,000	109,000
<b>Total (10 requests)</b>				<b>1,448,000</b>	<b>130,320</b>	<b>1,578,320</b>

### Requests for preparation funding for HFC Investment projects

UNDP is submitting 7 requests for the preparation of HFC investment projects as per the table below. The associated requests for preparation funds are included in Annex 3.

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	12	30,000	2,100	32,100
China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	12	30,000	2,100	32,100
Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	12	30,000	2,100	32,100
Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	12	30,000	2,100	32,100
Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	12	30,000	2,100	32,100
<b>Total (7 requests)</b>				<b>210,000</b>	<b>14,700</b>	<b>224,700</b>

### III. SUMMARY OF FUNDING REQUESTS (WORK PROGRAMME AMENDMENT)

The table below summarizes the funding requests for non-investment activities and proposals, as part of UNDP's Work Programme Amendment for 2017, submitted to the 80<sup>th</sup> ExCom Meeting:

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
Chile	TAS	Enabling activities for Kigali Amendment	18	33,000	2,970	35,970
China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	12	30,000	2,100	32,100
China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	12	30,000	2,100	32,100
China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	12	30,000	2,100	32,100

Country	Type	Title	Duration (months)	Amount	Agency Fee	Total
China	TAS	Enabling activities for Kigali Amendment	18	165,000	14,850	179,850
Colombia	TAS	Enabling activities for Kigali Amendment	18	250,000	22,500	272,500
Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	24	179,857	12,590	192,447
Costa Rica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	12	30,000	2,100	32,100
Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	12	30,000	2,100	32,100
Fiji	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	24	347,194	24,304	371,498
Jamaica	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Lebanon	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	24	357,760	25,043	382,803
Panama	INS	Institutional Strengthening Renewal (Phase VIII)	24	191,360	13,395	204,755
Peru	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	18	150,000	13,500	163,500
Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	24	193,024	13,512	206,536
Uruguay	TAS	Enabling activities for Kigali Amendment	18	100,000	9,000	109,000
Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	12	30,000	2,100	32,100
<b>Total (22 requests)</b>				<b>2,927,195</b>	<b>233,864</b>	<b>3,161,059</b>

**ANNEX 1**

**List of all UNDP submissions for funding to the 80<sup>th</sup> ExCom Meeting**

No	Country	Type	Description	Funding Request for the 80 <sup>th</sup> ExCom (US\$)		
				Amount	Agency Fee	Total
1	Bangladesh	INV	Conversion from HFC-134a to isobutane in manufacturing household refrigerator at Walton Hi-Tech Industries Limited	3,131,610	219,213	3,350,823
2	Barbados	PHA	Stage I HPMP - 2nd tranche	38,000	3,420	41,420
3	Brazil	PHA	Stage II HPMP - 2nd tranche	6,037,509	422,626	6,460,134
4	Chile	TAS	Enabling activities for Kigali Amendment	33,000	2,970	35,970
5	China	PHA	HPMP Stage II - ICR 2nd tranche	20,000,000	1,300,000	21,300,000
6	China	PHA	HPMP Stage II - Solvent 2nd tranche	3,777,190	245,517	4,022,707
7	China	PRP	Air conditioning and production line optimization from HFC-134a to HFO-1234yf as refrigerant in a mobile air conditioning manufacturer	30,000	2,100	32,100
8	China	PRP	Conversion from HFC-245fa to HFO as a foam agent in a refrigerator manufacturer	30,000	2,100	32,100
9	China	PRP	Conversion from HFC-134a to HC-290 in a freezer manufacturer	30,000	2,100	32,100
10	China	PRP	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.	30,000	2,100	32,100
11	China	TAS	Enabling activities for Kigali Amendment	250,000	22,500	272,500
12	Colombia	TAS	Enabling activities for Kigali Amendment	250,000	22,500	272,500
13	Colombia	INV	Conversion from HFC-134a to isobutane in the manufacture of domestic refrigerators at Mabe Colombia	3,024,067	211,685	3,235,752
14	Costa Rica	PHA	Stage I HPMP - 4th tranche	106,000	7,950	113,950
15	Costa Rica	INS	Institutional Strengthening Renewal (Phase XII)	179,857	12,590	192,447
16	Costa Rica	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
17	Dominican Republic	PRP	Conversion from HFC-134a to HC-290 in the manufacture of commercial refrigerators at Farco	30,000	2,100	32,100
18	DR of the Congo	PHA	Stage I HPMP - 3rd tranche	24,000	2,160	26,160
19	Egypt	PRP	Elimination of HFC in the manufacture of PU Foam	30,000	2,100	32,100
20	Fiji	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
21	Indonesia	INS	Institutional Strengthening Renewal (Phase XI)	347,194	24,304	371,498
22	Jamaica	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
23	Lebanon	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
24	Malaysia	INS	Institutional Strengthening Renewal (Phase XII)	357,760	25,043	382,803
25	Mauritania	PHA	Stage I HPMP - 1st tranche	105,000	7,350	112,350
26	Mexico	INV	HCFC phase-out in the production of refrigerators at MABE Mexico	2,000,000	140,000	2,140,000
27	Nigeria	PHA	Stage II HPMP - 1st tranche	3,047,345	213,314	3,260,659
28	Panama	INS	Institutional Strengthening Renewal (Phase VIII)	191,360	13,395	204,755
29	Peru	PHA	Stage II HPMP - 1st tranche	606,475	42,453	648,928
30	Peru	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
31	Timor-Leste	PHA	Stage II HPMP - 1st tranche	70,000	6,300	76,300
32	Timor-Leste	PHA	Stage I HPMP - 2nd tranche	10,680	961	11,641

No	Country	Type	Description	Funding Request for the 80th ExCom (US\$)		
				Amount	Agency Fee	Total
33	Trinidad and Tobago	TAS	Enabling activities for Kigali Amendment	150,000	13,500	163,500
34	Uruguay	INS	Institutional Strengthening Renewal (Phase XI)	193,024	13,512	206,536
35	Uruguay	TAS	Enabling activities for Kigali Amendment	100,000	9,000	109,000
36	Zimbabwe	PRP	Elimination of HFC-134a in the manufacture of domestic refrigerators	30,000	2,100	32,100
<b>Total (36 requests)</b>				<b>44,990,071</b>	<b>3,064,463</b>	<b>48,054,533</b>

**Notes:**

- a. All amounts in are in US dollars.
- b. Special reports due (delays, balances, status reports, etc.) as well as other projects not part of the WPA will be submitted separately.

**ANNEX 2**

**Funding requests for enabling activities in:**

**Chile  
China  
Colombia  
Costa Rica  
Fiji  
Jamaica  
Lebanon  
Peru  
Trinidad and Tobago  
Uruguay**

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** Chile

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY(IES):** UNIDO, UN Environment (UNEP)

**NATIONAL COORDINATION AGENCY:** MINISTRY OF ENVIRONMENT / NATIONAL OZONE UNIT  
(UNIDAD NACIONAL DE OZONO)

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months

**PROJECT COST:** USD 150,000

**SUPPORT COST:** (7% for UNDP and UNIDO and 13% for UNEP) USD 14,740

**TOTAL COST FOR THE MLF:** USD 160,500

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## 1. Background

On behalf of the Government of Chile, UNDP as leader agency, with UN Environment and UNIDO as cooperating agencies, submit this Project request, to facilitate and support the country early ratification of the Kigali Amendment and to undertake specific initial activities that help them fulfil their initial obligations with regard to hydrofluorocarbon (HFC) phase-down in line with the Kigali Amendment, according to Executive Committee decision 79/46. Based on that decision, eligible funding for enabling activities in Chile are US\$ 150,000.

## 2. Country ODS policy and Compliance Status

Chile is a party to the Montreal Protocol (MP), operating under paragraph 1 of Article 5. The Ozone Unit of the Ministry of Environment acts as the country's Focal Point for the MP, coordinating and implementing efforts to reduce and eliminate ODSs, in close cooperation with public and private sector stakeholders.

The country ratified the Vienna Convention (Mar. 1990), the Montreal Protocol (Mar. 1989) and its Amendments in London (Apr. 1992), Copenhagen (Jan. 1994), Vienna (1996), Montreal (Jun. 1998), Beijing (May 2000), and is classified as a party operating under paragraph 1 of Article 5 of the Protocol.

Furthermore, the Ministry of Environment of Chile in coordination with the Ministry of Foreign Affairs are working in the ratification of the Kigali Amendment to the MP. The Government of Chile is making its best efforts to ratify the Kigali Amendment as early as possible.

The institutional framework is spearheaded by the Ozone Unit (NOU) of the Ministry of Environment, which coordinates all activities and regulations for compliance with the MP. In this task, it cooperates with public bodies such as the Ministries of Health, Foreign Affairs, the Economy, Financing, and Education, as well as public services such as the Agriculture and Livestock Service (SAG), the Office for Agrarian Policies and Studies (ODEPA) and the National Customs Service; and bodies such as the Chilean Chamber of Refrigeration and Air Conditioning and educational institutions that teach professional programs in refrigeration.



The legal framework for controlling ozone-depleting substances (ODS) is based on Law 20096<sup>12</sup>, known as the “Ozone Law”, which came into force on March 23, 2006, and establishes control mechanisms that apply to all ODS, together with measures for outreach, evaluation, prevention, and protection from ultraviolet radiation.

The Ozone Law establishes the general framework for ODS control, covering pure substances, mixtures, and substances contained in products. It also allows decisions and commitments to be made within the framework of the Montreal Protocol (MP).

Under this instrument and through the application of HFC control measures, including as stipulated in the Kigali Amendment to the MP, the country has the regulatory footing to prepare sector-based control measures for import and export of these substances, including a schedule for reduction and corresponding maximum import volumes.

In parallel, the Ministry of Environment keeps the Pollutant Release and Transfer Registry (PRTR), which implements a registry of equipment/products that contain ODS, in which importers and exporters must declare applicable operations. Its objective is to compile a source of information to allow control measures and import reduction mechanisms to be established in the future.

The regulations on the Ozone Law (Supreme Decree 75/2012, MINSEGPRES<sup>13</sup>) stipulate a number of measures that facilitate the introduction of alternatives to HCFCs, including discounting quantities of HCFCs that are no longer used following conversion processes. Its objective is to eliminate the consumption of these substances based on the country MP goal and to support efforts made by major users to convert their production processes.

The NOU is also promoting efforts to convert equipment that uses HFCs to non-HFC alternatives, with a particular emphasis on natural refrigerants, such as hydrocarbons and transcritical CO<sub>2</sub>. The same is true for the rigid polyurethane foam sector which will be implemented under HPMP Stage II alongside projects that are already underway, as the introduction of transcritical CO<sub>2</sub> technology in Chilean supermarkets, financed by the Climate and Clean Air Coalition (CCAC)<sup>14</sup> and HPMP Phase I.

The national regulatory framework for ODS control classes HCFCs as controlled substances, so under MINSEGPRES Supreme Decree 75/2012 importers must be registered in the Registry of ODS Importers and Exporters (i.e. the licensing system), which allocates each an annual individual maximum import volume (i.e. quota), calculated based on ODS consumption goals established in that Decree. Quotas and licenses are allocated in accordance with the criteria specified in MINSEGPRES Supreme Decree 75/2012.

For implementation, the National Customs Service is tasked with overseeing and enforcing substances imported and exported; the Ministry of Health oversees substances that constitute health hazards; and the Ministry of the Economy regulates labelling of equipment and products that contain HCFCs.

Finally, as indicated in the Ozone Law (N° 20096/2006), the regulatory framework described above is applicable for extension to cover control over HFCs within the framework of the Kigali Amendment, approved at the 28th Meeting of Parties to the MP.

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<sup>12</sup> Law 20,096 of the Ministry General Secretariat of the Presidency, published in the Official Gazette on March 23, 2006, establishes control mechanisms for ozone-depleting substances.

<sup>13</sup> Supreme Decree 75, published in the Official Gazette on December 11, 2012, Ministry General Secretariat of the Presidency This instrument approves regulations that establish standards applicable to imports and exports of ozone-depleting substances, maximum import volumes and distribution criteria.

<sup>14</sup> Reference: <http://portal.mma.gob.cl/ministerio-del-medio-ambiente-implementa-en-supermercado-de-valdivia-inedito-sistema-de-refrigeracion-con-co2-transcritico-en-chile/>

The National Customs Service and the NOU jointly modified the customs tariffs and specific descriptors for HCFCs and HFCs (pure substances, blends, equipment, and products), thus aiding in their identification when imported and exported. This also ensures that the system remains up to date in accordance with changes in technology or with patterns in international trade<sup>15</sup>.

The country has expressed consistent support for the Kigali Amendment to the Montreal Protocol since negotiations began. Currently the Government of Chile is at its last stages of the ratification process, in order to deposit the ratification in the near future.

### **3. Projects funded by the Multilateral Fund**

The Stage I of the HCFC Phase-out Management Plan (HPMP-I) for Chile was approved at the 63<sup>rd</sup> meeting of Executive Committee. As was established in the updated Agreement between the Government of Chile and the Executive Committee (ExCom) at its 76<sup>th</sup> meeting, the country will finalize this stage at December 2017.

The Stage II HPMP (HPMP-II) for Chile was approved in May 2016 at the 76th Meeting of the Executive Committee. The project was approved in accordance with the Agreement between the Government and the ExCom for the period 2016 to 2021 to reduce HCFC consumption to 45 percent of its baseline by 2020 and 65 percent of its baseline by 2021. Likewise, the government committed to issue a ban on the import and use of HCFC-141b for the polyurethane foam manufacturing sector and on imports and exports of HCFC-141b contained in pre-blended polyols.

Chile is successfully achieved more than 10% of HCFCs reduction in 2016. The country baseline was 87.5 ODP tonnes and 63.33 ODP tonnes are reported as consumption in 2016.

Currently, the country is implementing the first tranche of Stage II HPMP and has achieved the following results:

- Training courses on introduction to natural refrigerants (7 courses).
- Training course (stage 2) on Best Refrigeration Practices (1 course).
- Train-the-trainers course and workshop on Safe Management of hydrocarbons refrigerants in R&AC, for teachers and technical advisors.
- Seminars on HPMP Stage II activities and trending in uses of ODS refrigerants and its alternatives, on Expo Frio-Calor Sur (2 seminars to technicians) and Instituto Tecnológico de la Universidad Católica de la Santísima Concepción (1 seminar to students).

In this regard, the NOU has also been developing the following complementary activities which contribute to limit the HFC growth in the country:

- Survey on ODS alternatives (HFCs and others);
- Update of the Chilean Standard on “Best Refrigeration Practices” and the elaboration of the new standard on “Best Practices in R&AC systems using flammable refrigerants”;
- National inventory of HFC.

Likewise, Chile also signed the Paris Agreement on September 20, 2016, with a commitment to reduce CO<sub>2</sub> emissions per unit GDP by 30% from levels recorded in 2007, by 2030<sup>16</sup>. This Agreement was ratified by the National Congress (Apr. 2017). On ratifying it, the country will reduce GHG emissions and promote the use of alternatives to HFCs, in recognition of its vulnerability to the effects of climate

<sup>15</sup> Reference: Official Gazette of the Republic of Chile, Section I, Wednesday, December 28, 2016.

<sup>16</sup> Reference: <http://www.gob.cl/2015/09/29/asamblea-general-de-la-onu-chile-compromete-reduccion-de-un-30-de-emision-de-gases-de-efecto-invernadero-al-ano-2030/>, accessed January 20, 2017.

change, such as flooding, extreme heat, and declining water availability<sup>17</sup>.

The country has also successfully concluded an ODS alternatives survey in 2016, which showed the following for each user sector:

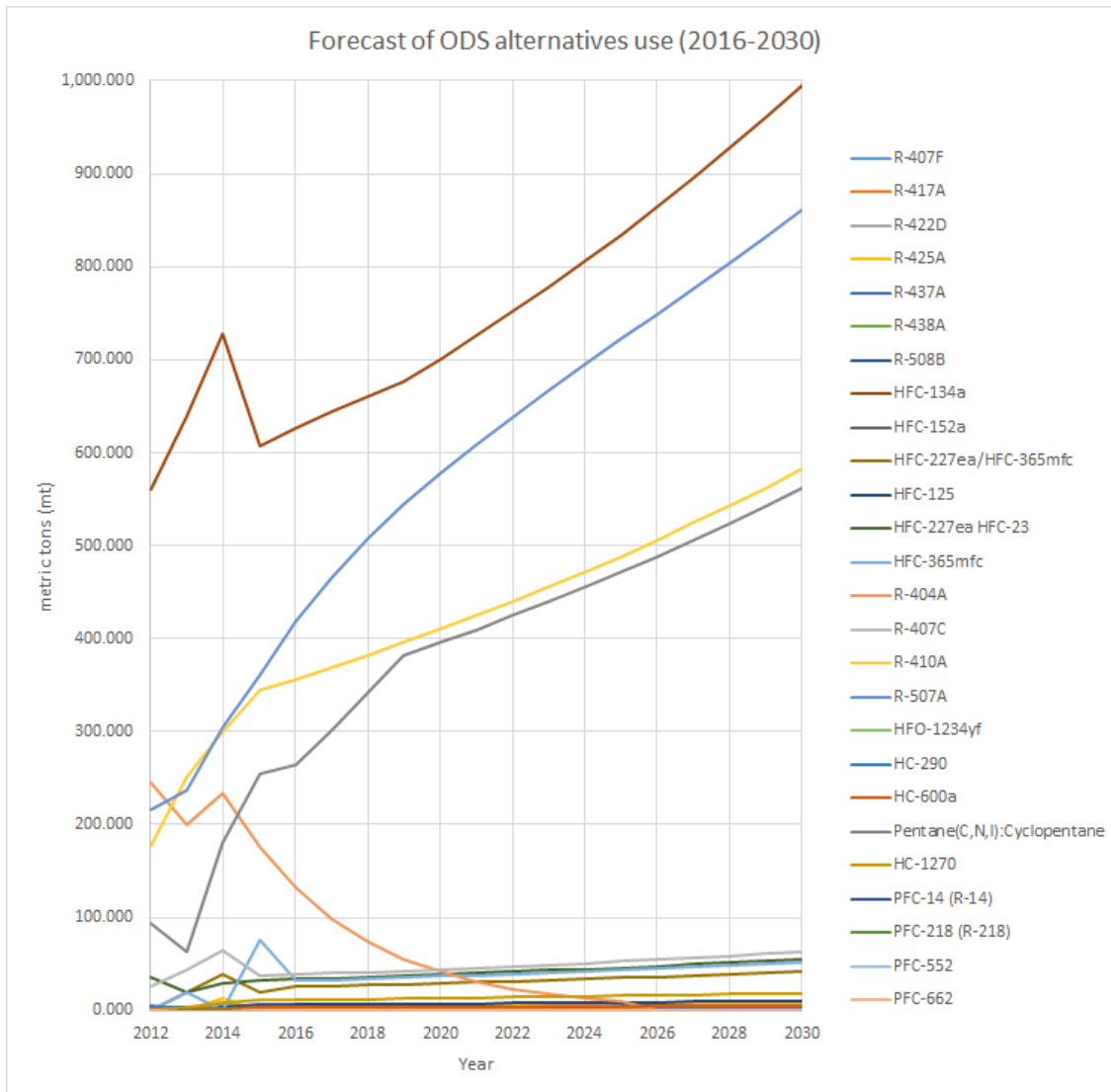
- Refrigeration: the formerly popular HCFC-22 has been slowly replaced with the alternatives R-404A, R-507A, and R-744 for industrial applications; with HFC-134a, R-404A, R-507A, HC-290, and R-744 (CO<sub>2</sub>) for commercial refrigeration; with HFC-134a and HC-600a for domestic refrigeration; and with HFC-134a, R-404A, and R-507A for mobile refrigeration.
- The most frequently used synthetic alternatives in refrigeration are HFC-134a, R-404A, and R-507A and the natural alternatives are HC-600a, HC-290, and R-744 (CO<sub>2</sub>), which is considered the best option for use at low temperatures, mainly in indirect and cascade refrigeration systems. This is the case for the implementation of refrigeration systems based on transcritical CO<sub>2</sub>, which have been installed in two supermarkets in the country, with co-financing from the CCAC and the MLF, respectively. It should be mentioned that the usage of ammonia (R-717, NH<sub>3</sub>) predominates in the agro-industrial sector.
- Air conditioning: The only alternative substance used in mobile air conditioning is HFC-134a. In the air conditioning sector, the principal alternatives to HCFC-22 are R-410A for domestic and commercial air conditioning, and R-407C in the industrial sector, with R-410A predominating.
- Maintenance sector: it is reported that R-507A was mainly used in industrial refrigeration, R-404A for commercial and industrial refrigeration, and HFC-134a for domestic and commercial refrigeration.
- Foam sector: HCFC-141b is the most heavily used substance in the foam sector, but large and medium-sized companies are replacing it with cyclopentane for manufacturing rigid panels of polyurethane foam. Small and Medium-sized enterprises (SMEs) have begun to use HFC-365mfc and HFC-365mfc/HFC-227ea blend as replacement substances for discontinuous production of polyurethane panels and spray application. However, in the framework of HPMP Phase II, an emerging group of blowing agents (HFO-1336mzz and HFO-1233zd) is being promoted as alternatives for discontinuous production of polyurethane panels and spray applications by SMEs.
- Fire extinguishing sector: uses HFC-227ea, followed by HFC-125 and HFC-23, the latter being used only infrequently and with a very small market share. Novec1230® (1,1,1,2,2,4,5,5,5-nonafluoro-4-trifluoromethyl-3-pentanone) is used to a lesser extent. Significant usage of N<sub>2</sub> is reported for refilling extinguishers, with extremely low usage of CO<sub>2</sub> for this purpose.
- Aerosol sector: the principal substances used are LPG (Liquefied Petroleum Gas; propane-butane mix), HFC-134a, and DME, with LPG accounting for more usage than any other substance, suggesting that it will continue to displace other options. The alternatives identified in the solvents sector are PFC-218, HFC-152a, and perfluorocarbons PFC-552 and PFC-662.
- Forecasts: Linear growth projections forecast a significant increase in imports of HFC-134a, R-507A, and R-410A for refrigeration, and to a lesser extent R-407C. Nonetheless, the projection for R-404A imports shows a severe decline, as this substance is being replaced with R-507A in commercial and industrial refrigeration applications, such as supermarkets, cold stores, distribution centres, etc.

Forecasts for the foam sector predict an increase in HFC-365mfc and cyclopentane, and to a

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<sup>17</sup> Economic Commission for Latin America and the Caribbean (ECLAC) / Organisation for Economic Co-operation and Development (OECD), *Environmental performance reviews: Chile 2016*, Santiago, 2016.

lesser extent the blend HFC-227ea/HFC-365mfc. Other alternative substances are expected to see limited growth, not rising far above current import levels.



Source: “Report - Survey on ODS alternatives (HFCs and others)”, Ozone Unit, Ministry of the Environment of Chile – UNIDO, Jan. 2017

Graphic 1: Forecast of ODSs alternatives, 2016-2030 (metric tonnes)

#### 4. Institutional arrangements for implementation of enabling activities.

Implementation of the enabling activities will be accomplished using the existing national infrastructure and institutional setting already established for ODS phase-out activities. Institutional arrangement in Chile is such that management of ozone depleting substances projects are executed by the National Ozone Unit, under the Division of Climate Change of the Ministry of Environment. The implementing agencies, UNDP, UN Environment and UNIDO staff members, regional and national experts/consultants will provide support to the NOU in this project implementation.

Other relevant stakeholders will be involved in the discussion on the Kigali amendment ratification process through the already established Inter-Agency Commission (IS project Steering Committee), which has representatives from the Ministry of Environment, Agriculture, Foreign Affairs, Energy, Economy, and Finance and other governmental bodies. Several targeted meetings will be organized with the RAC association, Universities and vocational institutes, which are the institutions that have traditionally provided training in the refrigeration sector, and with the National Customs Service for assisting in development of licensing and quota system for HFCs.

### 5. Components proposed for enabling activities

<b>Proposed Component 1:</b>	<b>Facilitate early ratification of the Kigali Amendment</b>
<b>Implementing agency</b>	UNDP
<b>Objective:</b>	Achieve a broader understanding of the Kigali amendment provisions and to prepare the stakeholders for its implementation.
<b>Target Group:</b>	High-level decision makers, relevant governmental institutions, private companies and servicing technicians in the sectors that are using HFC
<b>Description of activities</b>	<ul style="list-style-type: none"> <li>• Stakeholder’s consultations to facilitate the ratification process at the national level.</li> <li>• Awareness raising of relevant stakeholders on HFC phase-down and energy efficiency improvement options.</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>• Stakeholders aware about the ratification of the Kigali amendment and its implications, both at legal and technical level.</li> <li>• Production of information fact sheets on the Kigali amendment to facilitate consultations and speed up the ratification.</li> </ul>
<b>Outcome</b>	The ultimate target of this component is ratification of the Kigali Amendment. However, the ratification process itself is done beyond the mandate of the NOU. With these activities, competent authorities and main private stakeholders will be well prepared to support the Kigali amendment ratification process and its implementation.

<b>Proposed Component 2:</b>	<b>Capacity-building &amp; training for alternatives</b>
<b>Implementing agency</b>	UNIDO
<b>Objectives:</b>	<ul style="list-style-type: none"> <li>• Provide basic training to the NOU, the governmental stakeholders, servicing sector and end-users for addressing the emerging responsibilities of the Kigali Amendment</li> <li>• Identify the needs of modification of existing regulation or creation of new regulation that would facilitate the HFC phase-down.</li> <li>• Develop a training for addressing the energy efficiency challenge in installation of new or updating existing R&amp;AC systems.</li> </ul>
<b>Target Group:</b>	NOU, governmental institutions related to HFC control (Environment - climate change, legal affairs-, Energy, Customs, and others), training centres in R&AC, Chilean Chamber of R&AC, RAC-installers and maintenance services, and others as appropriate.

<b>Description of activities</b>	<ul style="list-style-type: none"> <li>• Undertake a training for the NOU and its direct counterparts (stakeholders) from the public and private sector, on HFC regulation and control, including responsibilities of the application of the Kigali amendment, data reporting in CO<sub>2</sub> eq tonnes, energy efficiency, safety standards, etc.</li> <li>• Training on design, installation and maintenance of energy efficient R&amp;AC systems, related to low and zero-GWP replacement technologies to HFCs, i.e. natural refrigerants and not-in-kind technologies. The participants would belong to service sector (installation and maintenance), project developers, technical departments of big users, and teachers from educational centres, between others.</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>• Report of challenges and requirements for introducing low and zero-GWP alternatives on the R&amp;AC sectors, considering environmental and energy efficiency advantages in the selection of alternative technologies.</li> <li>• NOU staff upgrade their knowledge and skills to meet the new responsibilities, particularly to monitor the consumption of HFCs as well as to envisage a streamlined approach to HFC phase-down complementary with the country energy efficiency policy.</li> </ul>
<b>Outcome</b>	Main country stakeholders are able to accept the new expected roles due to their understanding of the shifting context, and acquiring confidence by using the opportunities associated to the Kigali Amendment implementation. The capacities of beneficiaries for critical analysis, debate and decision taking on alternative technology are thereby improved.

<b>Proposed Component 3:</b>	<b>Article 4B licensing &amp; Reporting</b>
<b>Implementing agency</b>	UN Environment (UNEP)
<b>Objective:</b>	Develop a required regulatory package to set up import/export licensing system for HFC and HFCs alternatives.
<b>Target Group:</b>	NOU, National Customs Service, and ODSs alternative importers.
<b>Description of activities</b>	<ul style="list-style-type: none"> <li>• Consultancy on a comprehensive review of local licensing/quota system of ODS's resulting in a proposal for how to include HFCs, HFCs blends, and HFOs into the licensing system. Including the support to the NOU to review and improve the current approach and methodologies related to the collection, verification and country reporting of HFCs and alternatives</li> <li>• International expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends, in order to ensure proper monitoring and recording of imports/exports of HFCs and alternatives substances, achieving HFC phase-down goals.</li> <li>• Training of Customs officers on import and export control of HFC and HFC blends.</li> <li>• Compilation of regulations related to HFC, including those related to energy efficiency and climate change.</li> </ul>

<b>Outputs</b>	<ul style="list-style-type: none"> <li>• Current licensing/quota system updated to meet all requirements of the Article 4B as well as to facilitate the country compliance with the HFCs phase-down schedule.</li> <li>• Modification and update of the customs import/export licensing system for HFC and HFC blends and a proposal of the quota system to be implemented.</li> <li>• Recommendations for further planning of policy measures, technical assistance activities and assignation of roles officially defined for reaching a cost/effective HFCs phase-down.</li> </ul>
<b>Outcome</b>	The NOU of the Ministry of Environment is empowered to an effective implementation of HFCs controls once the Kigali Amendment is ratified

## 6. Budget

Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 87.5 ODP t., the Government of Chile requests to the 80th Meeting of the Executive Committee the amount of USD\$ 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

Table 1. Budget per component

Activities	Proposed cost in (US\$) without PSC
Component 1: Facilitate early ratification of the Kigali Amendment	33,000
Component 2: Capacity-building & training for alternatives	86,000
Component 3: Article 4B licensing & Reporting	31,000
<b>Total in (US\$) without PSC</b>	<b>150,000</b>

Table 2. Budget per item

Activities	Item	US\$
Component 1: Facilitate early ratification of the Kigali Amendment	Conduct at least six stakeholder consultation meetings to facilitate the ratification process at the national level.	27,000
	Production of information sheets on the Kigali amendment to facilitate consultations and speed up the ratification	6,000
<i>Subtotal 1</i>		<b>33,000</b>
Component 2: Capacity-building & training for alternatives	Undertaking a training for the NOU and its direct counterparts (from public and private sector, on HFC regulation and control, including participants from the Ministry of Environment (climate change, legal affairs), Ministry of Energy, Customs Service, and representative of private associations related to HFC in R&AC sector, between others.	
	- 8 participants x training, USD 5,000 each (air tickets and DSA)	40,000
	- 8 training courses, USD 2,500 x participant	20,000

Activities	Item	US\$
	Hiring an international expert to train on design, installation and maintenance of R&AC energy efficient systems, related to low or zero GWP replacement technologies to HFCs. At least 2 training courses. - 1 expert, USD 6,500 x 4 months, including travel fees.	26,000
<b>Subtotal 2</b>		<b>86,000</b>
<b>Component 3: Article 4B licensing &amp; Reporting</b>	Hiring a local consultant to support the government with: <ul style="list-style-type: none"> <li>Comprehensive review of local licensing/quota system of ODS's resulting in a proposal for how to include HFCs, HFCs blends, and HFOs into the licensing system.</li> <li>Support the NOU to review and improve the current approach and methodologies related to the collection, verification and country reporting of HFCs and alternatives.</li> </ul>	7,100
	Hiring an international expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends, to ensure proper monitoring and recording of imports/exports of HFCs and alternatives substances, achieving HFC phase-down goals.	12,000
	Training of Customs officers on import and export control of HFC and HFC blends.	8,900
	Contracting a national lawyer (part time, 1month) to support the NOU on compilation of regulations related to HFC, including those related to energy efficiency and climate change.	3,000
<b>Subtotal 3</b>		<b>31,000</b>
<b>Total (US\$)</b>		<b>150,000</b>

## 7. Enabling activities milestones and time plan

Activities	2018												2019					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
<b>Component 1: Facilitate early ratification of the Kigali Amendment</b>																		
Signature of the formal documents between implementing agencies and the Government.	x	x	x															
Elaboration of awareness raising materials related to the Kigali Amend			x	x														



Activities	2018												2019					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Stakeholder's consultations to facilitate the ratification process of the Kigali Amendment.				x	x	x	x	x	x	x	x	x	x	x	x			
<b>Component 2: Capacity-building &amp; training for alternatives</b>																		
Hiring experts and consultants		x	x															
Training of the NOU and its direct counterparts from public and private sector, on HFC regulation and control.				x	x	x	x	x	x									
International expert to train on design, installation and maintenance of R&AC energy efficient systems (at least 2 training								x	x	x	x							
<b>Component 3: Article 4B licensing &amp; Reporting</b>																		
Hiring experts and consultants				x	x													
Comprehensive review of local licensing/quota system of ODS alternatives and based-products and equipment.						x	x	x	x									
International expert assisting customs authorities in defining the national licensing and quota system model to be adopted for individual HFCs and HFC blends									x	x	x	x	x	x	x			
Training of Customs officers on import and export control of HFC and HFC blends							x	x										
National lawyer to support the NOU on compilation of regulations related to HFC						x												

**8. Statement by the Government and Implementing Agency**

The Government of Chile and UNDP as leader agency, UN Environment and UNIDO as cooperating agencies, confirm that the proposed enabling activities will not delay the implementation of HCFC phase-out activities in the country.

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** China

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** UN Environment

**NATIONAL COORDINATION AGENCY:** Foreign Economic Cooperation Office of MEP, China

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** no

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months  
**PROJECT COST:** USD 250,000  
**SUPPORT COST:** USD 25,900  
**TOTAL COST FOR THE MLF: USD 275,900**

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the government of China to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in relation to the hydrofluorocarbon phase-down under the Amendment:
  - (1) Capacity-building and training for the handling of hydrofluorocarbon alternatives in the servicing, manufacturing and production sectors;
  - (2) Institutional strengthening;
  - (3) Article 4B licensing;
  - (4) Reporting;
  - (5) Demonstration projects; and
  - (6) Development of national strategies;
2. In its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali Amendment.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of China signed the Vienna Convention for the Protection of the Ozone Layer in June 1989, the Montreal Protocol on Substances that Deplete the Ozone Layer and its London Amendment in June 1991. Since then, China has been committed to phase-out ODS in accordance with its designation as an Article 5 (A5) country. Subsequently, the Chinese Government ratified the Copenhagen Amendment in April 2003 and the Montreal Amendment and the Beijing Amendment in May 2010. The Chinese Government approved “the Country Programme on the Gradual Phase-out of Ozone Depleting Substances” in January 1993 and established phase-out strategy for major sectors of ODS production and consumption in 1995. In November 1999, the Chinese Government approved the revised version of the Country Programme.
5. The Chinese Government attached great importance to ozone layer protection. Since China joined the Montreal Protocol in 1991, the State Council approved establishment of the National Leading Group for the Protection of the Ozone Layer with 18 ministries and commissions as members. The Ministry of Environmental Protection (MEP) served as the chief of the National Leading Group. The National Leading Group is an interagency organization responsible for implementation of the Vienna Convention and the Montreal Protocol, carries out the Country Programme, reviews implementation programmes and makes decisions. The Coordination Group for the Protection of the Ozone Layer and the Multilateral Fund Project Management Office were established under the Leading Group.
6. With the support of Multilateral Fund (MLF) and international institutions, China has implemented 31 sector plans and more than 400 individual projects. China has phased out production and consumption of CFCs, Halons, CTC, TCA, Methyl Bromide and HCFCs with a total amount of 270,000 metric tons, accounting for about half of the total phase-out amount of A5 countries.
7. Chinese Government attached great importance to the establishment of relevant policies. In 2010, the State Council approved and enforced Regulation on Ozone Depleting Substances management to

standardize and specify objective, obligation and responsibilities for ODS Phase-out. Over the past twenty years, Chinese Government has issued over 100 policies and regulations, and strengthened implementation and enforcement of laws and regulations to ensure that ODS production and consumption could be phased out gradually at the national level. MEP implements the production and consumption quota system with technical support from the National Ozone Unit (Foreign Economic Cooperation Office). National ODS Import and Export Management Office (I&E office) manages ODS import and export in coordination with three Ministries, Ministry of Environmental Protection, Ministry of Commerce and General Administration of Customs.

8. The government of China has achieved the target of 10% reduction of HCFCs in 2015 through the successful implementation of the stage I HCFCs Phase-out Management Plan (HPMP) and is implementing the Stage II of HPMP for the 35% reduction of HCFCs by 2020.
9. Although the government of China has a well-established legal and institutional framework to implement the Montreal Protocol and its Amendments ratified so far, the Kigali Amendment brings immediate and additional challenges. It is crucial for China to implement enabling activities for early ratification of the Kigali Amendment for establishing a sound foundation to undertake future work towards its implementation.

### **C. Objective**

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

### **D. Activities to be Implemented**

11. Component 1: Enable the Legal Framework for the ratification and implementation  
A legal consultant will be employed to provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers. Legal consultancy will assess and identify the legislation and policies needed to fulfill the initial obligation of the Kigali Amendment, and provide suggestions on the establishment of the legislation and policy framework for the HFCs management.
12. Component 2: Facilitate the coordination mechanism  
Project will support the identification of new partners for the Kigali Amendment, coordination activities between relevant government institutions and stakeholders during the ratification process, and review/upgrading of the established coordination mechanism at the national level to provide guidance on the policies and action plans for ratifying/initial implementing the Kigali Amendment. A coordination meeting including all Implementing Agencies of Multilateral Fund working in China is to be organized.
13. Component 3: Establish the licensing systems on HFCs import/export  
  
Project will support the National ODS Import and Export Management Office to review the current ODS import/export licensing/quota system for covering HFCs import/export control, and to coordinate with the stakeholders and national institutions to put the licensing system on HFC import/export in place once China ratifies the Kigali Amendment.

14. Component 4: Establish HFCs data reporting system

Project will assess the current ODS production and consumption data reporting system and extend it to the HFCs in line with the data reporting requirement of A7 and country program, and support the establishment of HFC-23 by-product emission reporting and monitoring system by 1 Jan, 2020.

15. Component 5: Undertake an initial research on national strategy on HFCs phase-down

Project will support an initial research on national strategy for the ratification and implementation of the Kigali Amendment, including policy, institution and management framework, the information on HFCs production and consumption, sector profile and analysis, estimated baseline, and the prediction of the growth of HFCs, mapping the alternative technology, linkage with HCFC phase-out, identifying potential priority areas for HFCs phasing down to fulfil the initial obligation.

16. Component 6: Awareness raising and training

The outreach/awareness activities will be conducted to targeted groups and stakeholders involved in the ratification processes of the Kigali Amendment. A training workshop to the key national stakeholders especially FECO colleagues for the new skills/knowledge will be organized for better implementation of the Kigali Amendment.

**E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs and policy on the licensing system for HFCs import/export.
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) An initial research on national strategy on phasing down HFCs.
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered, and the capacity of key stakeholders for the implementation of the Kigali Amendment enhanced.
- (g) Ratification of the Kigali Amendment

**F. Budget Description**

17. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 18,865 ODP tonnes, the government of China requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 250,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Implementing Agency	Budget (US \$)
Component 1	Enable the Legal Framework	UNDP	30,000
Component 2	Facilitating the coordination	UNDP	35,000
Component 3	Establish the licensing systems	UN Environment	40,000
Component 4	Establish HFCs data reporting system	UNDP	20,000
Component 5	Undertake an initial research on national strategy on HFCs phase-down	UNDP	80,000

Component 6	Awareness raising and training	UN Environment	45,000
Subtotal		UNDP	165,000
Subtotal		UN Environment	85,000
<b>Total project cost</b>			<b>250,000</b>
Supporting cost		UNDP	14,850
Supporting cost		UN Environment	11,050
<b>Total cost</b>			<b>275,900</b>

**G. Implementation Timeframe**

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b><i>Project Start-up</i></b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b><i>Project Implementation</i></b>																			
5	Information Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Framework																		
9	Licensing and Report assessment																		
10	The initial research on national strategy on HFCs phase-down																		
11	Awareness activities and training																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** Colombia

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT/OZONE TECHNICAL UNIT (UNIDAD TÉCNICA OZONO – UTO)

**PROJECT INCLUDED IN CURRENT BUSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

<b>PROJECT DURATION:</b>	18 months
<b>PROJECT COST:</b>	USD 250,000
<b>SUPPORT COST: (9%)</b>	USD 22,500
<b>TOTAL COST FOR THE MLF:</b>	<b>USD 272,500</b>

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Colombia to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.



## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of Colombia acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Colombia has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The Ozone Technical Unit implements the quota system in coordination with the National Tax and Customs Direction - DIAN and The National Authority for Environmental Licensing-ANLA.
6. The Government of Colombia is implementing the Stage II of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results on:
  - Reduction of 36% for the HCFCs consumption in 2017.
  - Continuing the closely work with the customs authority to achieve and maintain compliance with Montreal Protocol targets through monitoring trade.
  - Strengthening of the legal framework to control and monitor HCFCs consumption through import/export licensing and quota systems and new regulations;
  - Developing synergies with Climate Change initiatives which resulted in the formulation and submission of the Nationally Appropriate Mitigation Action (NAMA) for domestic refrigeration sector in Colombia in order to reduce emissions of Greenhouse Gases-GHG effect and contribute to sustainable development.
  - Developing other projects as the Districts Cooling Project or demonstration projects, are ongoing to promote alternatives to replace ODS consumptions in several sectors.
  - 1850 certified technicians in standard NCL 280501022, 38 workshops on good practices and 5 seminars for SENA instructors were carried within a period comprehended between September of 2011 and July of 2015.
  - Establishment of 18 collection centers and five reclaim centers of refrigerants gases.

7. Although the Government of Colombia has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.
8. According to the inventory of substances carried out in 2016, there is evidence of growth of HFC as substitute substances offered by the market mainly for the refrigeration and air conditioning sector, in addition, estimates showed that the consumption of HFC in mixtures is higher than consumption of HFC as pure substance.

Currently, for the import of HFC to the country, it is necessary to process environmental license prior to the approval for import.

### **C. Objective**

9. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the Ozone Technical Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

### **D. Activities to be Implemented:**

(a) Enable the Legal Framework for the ratification: the project will provide technical support to the Ozone Technical Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the Ozone Technical Unit and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to HFCs and updating with the new series of pure and blended HFCs (at national level) and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

**E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (at national level);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.
- (g) Customs authorities to control HFC strengthened.

**F. Budget Description**

10. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 225.57 ODP t, the Government of Colombia requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD \$ 250,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	National Consultant	100,000
2.	Legal Advisor	35,000
3.	Strengthening of the customs authorities to control HFC	15,000
4.	Implementation of a dynamic quota system.	30,000
5.	Meetings and Missions	60,000
6.	Sundry	10,000
	<b>Total</b>	<b>250,000</b>

**G. Implementation Timeframe**

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Project Start-up</b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b>Project Implementation</b>																			
5	Support to the Ratification Process																		
6	Legal and Policy Fram. Review / General proposal of decree for HFC.																		
7	Strengthening of the customs authorities to control HFC																		

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
8	Implementation of a dynamic quota system.																		
9	Review the national Customs Codes																		
10	Review the licensing and data reporting systems on HFC																		
11	Workshops and meetings																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:**

Costa Rica

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministry of Environment and Energy

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months  
**PROJECT COST:** USD 150,000  
**SUPPORT COST: (9%)** USD 13,500  
**TOTAL COST FOR THE MLF:** USD 163,500

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Costa Rica to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down the HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, at its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regards to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of Costa Rica acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment.
5. In the Legislative Assembly of Costa Rica, there is a draft law, under legislative file number 20380, for ratification of the Kigali amendment. When the amendment is ratified by the competent national authority, it will initiate the disclosure process between HFC importers and consumers. A parallel process will establish the national regulations necessary to implement an import quota system for HFCs, as was the case with HCFCs.
6. The Costa Rica has successfully phased-out CFCs in RAC and PU Foam applications and has established an enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
7. The Costa Rica is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results:

Activities	Outcomes
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<p>Training for technicians and professionals for the maintenance of RAC equipment.</p>	<ul style="list-style-type: none"> <li>• 1223 Technicians in refrigeration and air conditioning equipment with improved capacities, holders of a license that recognized them the approval of the training on Good Practices of Service in Refrigeration and Air Conditioning, given by the National Institute of Learning (INA).</li> <li>• In parallel processes around the country, there have been different workshops focused on the proper management of refrigerants in the Refrigeration and Air Conditioning sector, to 536 people between technicians and professionals.</li> </ul>
<p>Establishment of mechanisms to facilitate the selection of efficient equipment and a system of incentives that promote the commercialization of eco-efficient equipment.</p>	<ul style="list-style-type: none"> <li>• Awareness of the managers of the chain of importing appliance stores (280 people between sellers and users of RAC equipment have been trained and sensitized to acquire eco-efficient equipment.</li> </ul>
<p>Improve import and export control systems. Improve access to users.</p>	<ul style="list-style-type: none"> <li>• Appropriate application of tariff codes for the import of ODS, through the creation of tariff items for HCFC and HFC mixtures.</li> <li>• Reducing the risk of illicit traffic in ODS</li> <li>• Control of HCFC import quotas</li> </ul>
<p>Strengthening HCFC recovery and utilization capacity and establishment of a mechanism for the storage of unwanted ODS including HCFCs.</p>	<ul style="list-style-type: none"> <li>• Equipment for recovery of refrigerant gases to: Three vocational schools (3 recuperators, 6 recovery tanks of 30 pounds and 3 1000 lbs tanks) Two special waste managers (2 recuperators, 4 tanks of 30 lbs and 2 tanks of 1000 lbs)</li> <li>• Promotion, dissemination and awareness of service providers to avoid emissions of HCFC gases with the adoption of good practices in service and maintenance of RAC equipment. (Recovery, recycling and reuse of gases)</li> </ul>
<p>Management and supervision of the program.</p>	<ul style="list-style-type: none"> <li>• Administrative management of the HCFC phase-out plan in Costa Rica as a focal point for compliance with defined actions to reach 35% reduction in HCFC consumption by 2020.</li> </ul>

Although Costa Rica has a well established Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and will require the establishment of a sound foundation to undertake future work towards its the implementation.

### **C. Objective**

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down under the Kigali Amendment, in line with the ExCom Decision 79/46.

### **D. Activities to be Implemented.**

(a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: the mechanism which the NOU and other governmental institutions and stakeholders (private and public sectors) rely on to consult, oversee and implement the Montreal Protocol activities in the country will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process. If required, further steps to establish or expand the proper mechanism for the Kigali Amendment will be taken.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs, and to develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

### **E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (also dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.



**F. Budget Description**

11. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 14,1 ODP t., the Costa Rica requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	15,000
2.	National Consultant	45,000
3.	Legal Advisor	10,000
4.	Information collection, consolidation and analysis	30,000
5.	Consultation meetings	30,000
6.	Missions	10,000
7.	Sundry	10,000
	<b>Total</b>	<b>150,000</b>

**G. Implementation Timeframe**

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Project Start-up</b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b>Project Implementation</b>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY: FIJI**

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministry of Local Government, Housing, and Environment,  
Government of Fiji

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months

**PROJECT COST:** USD 150,000

**SUPPORT COST: (9%)** USD 13,500

**TOTAL COST FOR THE MLF:** USD 163,500

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Fiji to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of Fiji acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. Fiji has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. Fiji is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) (with UNDP as lead implementing agency and UN Environment as cooperating agency) and has the target to reduce HCFC consumption by 35 per cent of the baseline by 2020 resulting in the phase out 2.95 ODP tonnes. The main activities to be implemented during stage I include regulatory actions and assistance to refrigeration servicing sectors and implementation and monitoring.
7. Although the Fiji has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

## **C. Objective**

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

## **D. Activities to be Implemented:**

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

(f) Conduct technical assessments on the industry to gage projections on HFC consumption and introduction of new alternatives: assess the current trend on HFC consumption and the viability of alternatives to the industry for better decision making on new policies and roadmaps in the implementation of Kigali Amendment

## **E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.
- (g) Comprehensive data on HFC and alternatives.

## **F. Project's Implementation Modality**

- The project will be implemented under the Direct Implementation Modality (DIM), where UNDP acts as implementing agency withholding responsibilities in terms of the project's operational, budgetary and financial monitoring. UNDP will support the National Ozone Unit in the recruitment of international and national consultants, as well as to undertake the hiring of services and missions required to implement the project.
- The Government of Fiji, through the National Ozone Unit housed by the Ministry of Local Government, Housing and Environment will act as executing partner, being responsible to coordinate and undertake the field activities of the project. The project is to be implemented through a nationally driven process composed by many cycles of stakeholder's consultations.

## **G. Budget Description**

Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 8.44\* ODP t., the Fiji requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	20,000
2.	National Consultant	25,000
3.	Legal Advisor	15,000
4.	Information collection, consolidation and analysis	55,000
5.	Consultation meetings	5,000
6.	Missions	20,000
7.	Sundry	10,000
	<b>Total</b>	<b>150,000</b>

\* once the new baseline is approved by the 29th MOP, we will adjust the project budget accordingly to the new baseline

## H. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b><i>Project Start-up</i></b>																			
1	ExCom Project Approval	■																	
2	Receipt of Funds		■																
3	Project Document Signature		■																
4	Consultants Recruitment		■	■	■														
<b><i>Project Implementation</i></b>																			
5	Data Collection				■	■	■	■											
6	Consultation Meetings				■	■	■	■	■										
7	Support to the Ratification Process				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
8	Legal and Policy Fram. review				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
9	Licensing and Report assessment				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
10	Awareness Programme				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** JAMAICA

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** The Planning Institute of Jamaica

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months  
**PROJECT COST:** USD 150,000  
**SUPPORT COST: (9 %)** USD 13,500  
**TOTAL COST FOR THE MLF:** USD 163,500

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the Government of Jamaica to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of Jamaica acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Jamaica has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. The Government of Jamaica is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved the following results: a comprehensive licensing system to monitor and control trade in ODS, a quota system for HCFCs, guidelines for the prohibition of importation of equipment containing HCFCs, guidelines on the procedures for export of HCFCs, replacement of 33 mT of HCFC 141b with methyl formate in the PU foam sector, completion of the training manual for technicians for good practices in refrigeration and the implementation of many train-the-trainers courses, among others.
7. Although the Government of Jamaica has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

## **C. Objective**

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

## **D. Activities to be Implemented:**



- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.
- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

#### **E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

#### **F. Budget Description**

9. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 16.30 ODP t., the Government of Jamaica requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	30,000.00
2.	National Consultants	45,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	25,000.00
5.	Consultation meetings	15,000.00
6.	Missions	15,000.00

7.	Sundry	5,000.00
	<b>Total</b>	<b>150,000.00</b>

**G. Implementation Timeframe**

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b><i>Project Start-up</i></b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b><i>Project Implementation</i></b>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** LEBANON

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministry of Environment

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** Yes (2018-2020)

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

<b>PROJECT DURATION:</b>	18 months
<b>PROJECT COST:</b>	USD 150,000.00
<b>SUPPORT COST: (9%)</b>	USD 13,500.00
<b>TOTAL COST FOR THE MLF:</b>	<b>USD 163,500.00</b>

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***Project Summary***

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support the Government of Lebanon to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. Lebanon is a Mediterranean country with land area of about 10,452 km<sup>2</sup> and a population of about 4.4 million. About 80% of the population is urban. The key economic sectors are services (about 60% of the Gross Domestic Product), Industry (about 26% of the Gross Domestic Product) and agriculture (about 14% of the Gross Domestic Product).
5. Lebanon ratified, in 1993, the Vienna Convention and the Montreal protocol with all its amendments to control the imports and consumption of substances that deplete the ozone layer.
6. Lebanon is, as well, a partner of the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants (CCAC), and ratified the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto protocol in 1997.
7. Lebanon's Country Programme reflected the national strategy and action plan for controlling the use of ozone depleting substances, and was prepared with the assistance of the National Working Committee, established in 1994, at the Ministry of Environment, and approved at the 17th Meeting of the Executive Committee of the Multilateral Fund, in 1995. The Country Programme prioritized Ozone Depleting Substance (ODS) phase-out activities in the main ODS consuming sectors, through technology transfer investments, technical assistance, capacity building, and training.
8. On the other hand, Hydrochlorofluorocarbons (HCFCs) are classified as controlled substances under Annex-C Group-I of the Montreal Protocol and are subject to the adjusted control schedule for Article-5 countries; to freeze the consumption at baseline levels from 2013 and reduction of 10% from baseline levels from 2015.
9. In Lebanon, HCFCs are used in various sectors, such as air conditioning, refrigeration, and foam manufacturing. The predominant HCFC used is the HCFC-22, mainly in the refrigeration and air conditioning sectors. HCFCs consumption in Lebanon increased from 413 metric tons in 2008 to 924 metric tons in 2014, indicating an average annual growth rate

of about 15%. The main reason for this growth is the sustained economic development and resulting increase in demand for consumer, commercial and industrial products that use HCFCs.

**Table 1 - Dates of ratification by Lebanon of the Montreal Protocol and its amendments were:**

AGREEMENT	RATIFICATION	ENTRY INTO FORCE
<b>Vienna Convention</b>	March 30, 1993	<b>June 28, 1993</b>
<b>Montreal Protocol</b>	March 30, 1993	<b>June 28, 1993</b>
<b>London Amendment</b>	March 31, 1993	<b>June 29, 1993</b>
<b>Copenhagen Amendment</b>	July 31, 2000	<b>July 31, 2000</b>
<b>Montreal Amendment</b>	July 31, 2000	<b>July 31, 2000</b>
<b>Beijing Amendment</b>	<b>November 21, 2008</b>	<b>November 21, 2008</b>

10. All chlorofluorocarbons (CFC) phase-out actions were addressed through the National Phase-out Management Plan for Annex-A, Group-I Substances (CFCs) in Lebanon (NPMP), which were completely phased-out in January 2010. The country has also completely phased-out consumption of Methyl Bromide by the year 2015.
11. HCFCs, therefore, have restrictions and will eventually be phased-out as per current schedule. Initially, for developing countries, the scheduled phase-out date for HCFCs is 01 January 2035 with an interim control measure of freezing HCFC production and consumption in 2013.
12. Recognizing the environmental benefits of reducing HCFC production and consumption earlier than the previous control schedule, the 20th Meeting of the Parties (MOP) to the Montreal Protocol, held in September 2007, through its Decision XIX/6 has accelerated the phase-out schedule for HCFCs by 10 years. For Article 5 countries, the first control was the freeze on production and consumption of HCFCs from 01 January 2013, at the Baseline Level (average of 2009 and 2010 consumption levels). The second control step was the reduction of 10% from the Baseline Levels on January 1, 2015. Subsequent control steps are 35% reduction by 2020, 67.5% by 2025, 97.5% by 2030 and complete phase out from January 1<sup>st</sup> 2040. The decision confirmed stable and sufficient funding for Article-5 countries to meet these new obligations.
13. In relation to the overall strategy for achieving the accelerated HCFC phase-out targets, Lebanon prepared the HCFC Phase-out Management Plan (HPMP Stage - I) during the period 2009-2011, and it was approved in July 2011 at the 64th Meeting of the Executive Committee. This Project defined an overall strategy and an action plan that would address the initial targets for compliance with HCFC phase-out i.e., 2013 and 2015 targets. HPMP Stage-I had a series of interventions including the project level support to two (2) HCFC consuming enterprises, technical assistance for adopting HCFC free technologies, capacity building and information outreach measures and project management, monitoring and coordination. As result of this, Lebanon committed to achieving reduction of HCFC consumption from its freeze level of 76.5 ODP tons to 60.44 ODP tons by the year 2017 and the project is under implementation.

14. The following step is the HPMP Stage-II for compliance with the post-2015 targets, when Lebanon submitted a request for funding the preparation to the 72nd meeting of the Executive Committee, which was approved in July 2014 as the preparation of the HCFC phase-out management plan (HPMP Stage-II) for Lebanon. These funds were used to conduct the field surveys on HCFC consumption levels and trends including update of data collected during HPMP Stage-I and developing a strategy for achieving future targets for HCFC phase-out as indicated above. The result of this survey was used to establish the HCFC consumption profiles and projected growth rates in HCFC consumption in the remaining sectors in Lebanon. The survey was carried out in 2015 and focused on data collection from the remaining enterprises in the Foam and refrigeration and air-conditioning (RAC) sectors as well as the servicing sector, and provided an analysis mainly from upstream suppliers of chemicals and equipment, as well as sampling of enterprise-level HCFC use patterns.
15. The Government of Lebanon designated UNDP to be the implementing agency for the HCFC phase-out management plan (HPMP, Stage-II) in Lebanon. In June 2016, the grant was approved by Decree No. 3630 of the Council of Ministers. The HPMP Stage-II project was initiated in August 2016 and several activities are being implemented since September 2016. During the implementation period of the stage-II (2016-2025) the focal areas will be the remaining PU foam, RAC industries and RAC servicing sectors. With this project support, the government is ensuring a proper and timely phase-out by implementing several applications, so that ODSs consumption is phased-out in a cost-effective way and the industry competitiveness remains unaffected due to the adoption of the new technologies (HFCs, HC, HFO, etc.), and adopting a strategy that would result in the introduction of low GWP ODS alternatives in the local market.
16. Although the Government of Lebanon has a well-established legal and institutional framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its implementation.

### **C. Objective**

17. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the Government of Lebanon to fulfil its initial obligations to phase-down HFCs in line with the Kigali Amendment and the ExCom Decision 79/46.

### **D. Activities to be Implemented:**

- a. Facilitate and support the ratification of the Kigali Amendment: the project will provide technical support to the Government of Lebanon (Ministry of Environment) to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment. Ultimately, this should speed up the process and assure that the correct information and legal support is delivered to the decision makers.

- b. Overall national policy framework for addressing HFCs phase-down plan: this policy and legislative assessment will be undertaken through a review of existing legislation related to the processes of identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that may prevent the future implementation of the Kigali Amendment;
- c. Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment. Improved interventions will be proposed to better integrate these stakeholders, undertake sound consultation processes and strengthen the ratification process.
- d. Provide technical assistance for safe adoption of alternatives: assess, from technical and economic points of view, the current available HFCs alternative technologies and the capacity needs in the local market to adapt and optimize low-GWP or zero-GWP alternatives to HFCs.
- e. Review the licensing and data reporting systems on HFCs: assess the current Licensing and Quota Systems applied to ODS to determine the actions that will be required to expand the control over the HFCs. Development of roadmaps to include new customs codes and tariff numbers for HFCs and their alternatives, in coordination with the Customs Authority, and develop for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- f. Conduct a study with the aim to: establish a baseline of existing HFCs banks in the RAC sector including relevant legislations, estimate GWP benefits of replacing HFCs with alternatives and develop measures and action plan for the future phasing down of HFCs in Lebanon
- g. Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

## E. Outputs

- i. Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- ii. Coordination Mechanism/Committee established to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- iii. Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- iv. New data reporting system (for Article 7 and Country Programme) on HFCs established;
- v. Montreal Protocol's Controlled Substances Licensing System for Lebanon expanded to allow control of HFCs;

- vi. Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.



## F. Budget Description

18. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 73.50 ODP tons, the Government of Lebanon requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 150,000.00 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	10,000.00
2.	National Consultants	35,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	55,000.00
5.	Consultation meetings	5,000.00
6.	Missions	10,000.00
7.	Awareness	10,000.00
8.	Sundry	10,000.00
	<b>Total</b>	<b>150,000.00</b>

## G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Project Start-up</b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b>Project Implementation</b>																			
5	Data Collection and Analysis of data																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

<b>FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE EARLY RATIFICATION OF THE KIGALI AMENDMENT</b>
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**COUNTRY:** PERU

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministry of Production

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**PROJECT DURATION:** 18 months

**PROJECT COST:** USD 150,000

**SUPPORT COST: (9 %)** USD 13,500

**TOTAL COST FOR THE MLF:** USD 163,500

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Peru to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of Peru acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Peru has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office.
6. The Government of Peru is implementing the Stage 1 of its HCFCs Phase-out Management Plan (HPMP) and has achieved the results such as the establishment of a quota system for HCFCs, the strengthening of the legal framework just to highlight some results and strengthening and training on alternatives.
7. Although the Government of Peru has a well established Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.

## **C. Objective**

8. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

**D. Activities to be Implemented:**

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.
- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

**E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

**F. Budget Description**

9. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 26.88 ODP t., the Government of Peru requests to the 80th Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	30,000.00
2.	National Consultants	45,000.00
3.	Legal Advisor	15,000.00
4.	Information collection, consolidation and analysis	25,000.00
5.	Consultation meetings	15,000.00
6.	Missions	15,000.00
7.	Sundry	5,000.00

<b>Total</b>	<b>150,000.00</b>
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**G. Implementation Timeframe**

	Activities	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b><i>Project Start-up</i></b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b><i>Project Implementation</i></b>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Regulatory & Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:**

Trinidad and Tobago

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** National Ozone Unit - Ministry of Planning and Development

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

<b>PROJECT DURATION:</b>	18 months
<b>PROJECT COST:</b>	USD 150,000
<b>SUPPORT COST: (9 %)</b>	USD 13,500
<b>TOTAL COST FOR THE MLF:</b>	<b>USD 163,500</b>

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Trinidad and Tobago to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

## **A. Introduction**

1. The Parties to the Montreal Protocol adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down the HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, at its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country's HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regards to HFC phase-down in line with the Kigali Amendment.

## **B. Country Background**

4. The Government of the Republic of Trinidad and Tobago ratified the Vienna Convention and its Montreal Protocol on August 28, 1989 for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of the Republic of Trinidad and Tobago is currently in the process of ratifying the Kigali Amendment. The process is going through several steps, with the approval of the cabinet already being obtained and is now currently going through the final steps in the Ministry of Foreign Affairs and CARICOM. This should lead to the prompt ratification of the Kigali amendment. When the amendment is ratified by the competent national authority, it will initiate the disclosure process between HFC importers and consumers. A parallel process will establish the national regulations necessary to implement a licensing and import quota system for HFCs, as was the case with HCFCs.
6. The Trinidad and Tobago has successfully phased-out CFCs in all sectors and has established an enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform and the HCFCs. The National Ozone Unit implements the quota system in coordination with the Customs Office, Ministry of Trade and Industry and the Trinidad and Tobago Bureau of Standards (TTBS).
7. The Trinidad and Tobago is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has achieved good results so far. The implementation is in general on track, but have faced some minor delays.
8. Although Trinidad and Tobago has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and will require the establishment of a sound foundation to undertake future work towards its the implementation.

## C. Objective

10. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down under the Kigali Amendment, in line with the ExCom Decision 79/46.

## D. Activities to be Implemented.

(a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

(b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;

(c) Assess coordination mechanisms needed to implement the Amendment: the mechanism which the NOU and other governmental institutions and stakeholders (private and public sectors) rely on to consult, oversee and implement the Montreal Protocol activities in the country will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process. If required, further steps to establish or expand the proper mechanism for the Kigali Amendment will be taken.

(d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs, and to develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;

(e) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment. This includes training for the main institution dealing with control of import like TTBS, Customs, Ministry of Trade, Custom Brokers, etc.

## E. Outputs

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (also dependent on the review to be undertaken by the World Customs Organization);
- (d) New data reporting system (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

## F. Budget Description



11. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 46,2 ODP t., the Trinidad and Tobago requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

No.	Budget description	Budget (US \$)
1.	International Expert	15,000
2.	National Consultant	35,000
3.	Legal Advisor	10,000
4.	Information collection, consolidation and analysis	30,000
5.	Consultation meetings	30,000
6.	Travel (National and International)	20,000
7.	Sundry	10,000
	<b>Total</b>	<b>150,000</b>

**G. Implementation Timeframe**

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b>Project Start-up</b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b>Project Implementation</b>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and Report assessment																		
10	Awareness Programme																		

**FUNDING REQUEST FOR THE IMPLEMENTATION OF ENABLING ACTIVITIES FOR THE  
EARLY RATIFICATION OF THE KIGALI AMENDMENT**

**COUNTRY:** Uruguay

**PROJECT TITLE:** Implementing Enabling Activities for the ratification of the Kigali Amendment

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** UNIDO

**NATIONAL COORDINATION AGENCY:** Ministry of Housing, Land Management and Environment, Climate Change Division, National Ozone Unit

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

<b>PROJECT DURATION:</b>	18 months
<b>PROJECT COST:</b>	USD 150,000
<b>SUPPORT COST: (9%)</b>	USD 13,500
<b>TOTAL COST FOR THE MLF:</b>	<b>USD 163,500</b>

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**Project Summary**

This document describes the proposed arrangements, implementation strategy and budgets for the enabling activities project that will support Uruguay to undertake the early ratification of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently the consultations with the national stakeholders to the ratification process;
- b) To facilitate the seamless early ratification of the Kigali Amendment;
- c) To draw upon the lessons learnt from the ratification process;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the ratification process.

**A. Introduction**

1. The Parties to the Montreal Protocol had adopted the Decision XXVIII/2 related to the Kigali Amendment to phase down HFCs, and had requested, in its paragraph 20, the Executive Committee to include the enabling activities to be funded in order to support the Article 5 countries in the process of ratification of the Kigali Amendment.
2. Therefore, in its 79th Meeting, the Executive Committee for the Implementation of the Montreal Protocol (ExCom), under the Decision 79/46, decided to provide funding for the implementation of the enabling activities required to support these Parties in ratification process for the early implementation of the Kigali, based on the country’s HCFC baseline consumption.
3. Moreover, the Countries would be allowed the flexibility to undertake a range of enabling activities to help their national ozone units to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment.

**B. Country Background**

4. The Government of Uruguay acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, and the country is taking significant steps towards the ratification of the Kigali Amendment.
5. The Government of Uruguay has successfully phased-out CFCs in RAC and has established enforceable Quota and Licensing regulations to control consumption of Methyl Bromide, Methyl Chloroform, Halons and the HCFCs. The National Ozone Unit implements the quota system in coordination with the National Customs Directorate.
6. Uruguay implemented the Stage I of its HCFCs Phase-out Management Plan (HPMP) and is implementing the Stage II, has achieved the following results:

<b>Project</b>	<b>Activities/Achievements</b>
<b><i>Adaptation and promulgation of policy instruments and capacity building</i></b>	
Adaptation and promulgation of policy instruments and capacity building	Design and implementation of HCFC quota and license system. Quota allocations set yearly from 2013 to 2017. Establishment of the VUCE system to control import, export and transit of HCFCs and equipment containing them. Training and/or updating knowledge on HCFC control measures to customs officers, customs brokers and importers of HCFC.
<b><i>Servicing Sector</i></b>	
Training in Good Practices in Refrigeration and Retrofits	Practical and theoretical training on good refrigeration practices focused on the new trends available in the region. 2 national training workshops on HCFC alternatives and good practices in refrigeration. 665 persons were trained between technicians, importers and students.

Project	Activities/Achievements
	<p>Practical trainings in 4 cities around the country on new alternatives for its adoption in the main centers and subsector of HCFC consumption. 262 technicians trained.</p> <p>Field visits of 3 local technical experts to regional refrigeration and air conditional fairs and technical congresses in 2013, 2015 and 2017.</p> <p>LATU laboratory strengthened with RAC systems for trainings and assessments of new alternatives.</p>
Phase-out of HCFC-141b used in flushing activities	<p>Committee formed to support the assessment of, and training on alternatives to HCFC-141b used in Flushing.</p> <p>Purchase of 2 closed-cycle flushing equipment.</p> <p>A 1-day workshop on flushing procedures and alternatives was conducted by an international expert.</p>
<b><i>Awareness raising programme to support the HCFC phase out</i></b>	
Awareness campaign	<p>Redesign of awareness material, focused on HCFC control measures.</p> <p>Acquisition of Ozzy and Zoe Ozone dummies.</p> <p>Awareness activities related with HCFC control measures and HCFC alternatives adoption were conducted with universities and colleges to spread the country's commitments and alternatives to HCFC.</p> <p>Design and distribution of promotional material related to HCFC alternatives.</p>

7. Although the Uruguay has a well establish Legal and Institutional Framework to implement the Montreal Protocol commitments ratified so far, the new Kigali Amendment will bring additional challenges to determine the national requirements and needs for the ratification of this Amendment and establish a sound foundation to undertake future work towards its the implementation.
8. Results of the ODS alternative survey conducted in 2016 showed that the consumption of HFC in the country has an upward trend, added to the limited availability of alternatives (such as HFO), this implicates additional challenges for the implementation of the Kigali amendment.

### **C. Objective**

9. The objective of this document is to request funding for the implementation of the enabling activities to allow the early ratification of the Kigali Amendment and to help the National Ozone Unit to fulfil their initial obligations with regard to HFC phase-down in line with the Kigali Amendment, in line with the ExCom Decision 79/46.

### **D. Activities to be implemented:**

- (a) Enable the Legal Framework for the ratification: the project will provide technical support to the National Ozone Unit to review the legal framework and to liaise with the national institutions involved in the ratification process of the Kigali Amendment in order to speed up the process and assure that the correct information and legal support is delivered to the decision makers.

- (b) Assess legislation and policies for the implementation of the Amendment: this policy and legislative assessment will be undertaken through a review of existing legislation on related to identification, management and control of the substances controlled by the Montreal Protocol, as well as to identify gaps in this framework that can prevent the future implementation of the Kigali Amendment;
- (c) Assess coordination mechanisms needed to implement the Amendment: mechanism of the NOU and other governmental institutions and stakeholders (private and public sectors) will be assessed to determine the capacity needs and gaps that exist for the implementation of the Kigali Amendment, and propose interventions better integrated these stakeholders, undertake sound consultation processes and strength the ratification process.
- (d) Review the licensing and data reporting systems on HFC: assess the current Licensing and Quota Systems applied to ODS in order to determine the actions that will be required to expand the control over the HFCs and develop roadmaps for new methodologies for collecting, analyzing, verifying, and reporting consumption and production of HFCs;
- (e) Training on technical aspects on HFC alternatives: technical training on HFC alternatives for the NOU and key stakeholders to identify national challenges and technical capabilities gaps that could generate obstacles in the implementation of the Kigali amendment.
- (f) Raise Awareness on the ratification and implementation processes of the Kigali Amendment: information awareness activities will be supported targeting groups and stakeholders involved in the ratification and future implementation processes of the Kigali Amendment.

## **E. Outputs**

- (a) Roadmap prepared on the Legal and Policy framework that contains the needs and actions required to allow the proper ratification and/or implementation of the Kigali Amendment;
- (b) Coordination Mechanism/Committee put in place to allow the proper consultation processes for the ratification and implementation of the Kigali Amendment;
- (c) Harmonized Customs Codes assessed in line with the new series of pure and blended HFCs for future action (dependent on the review to be undertaken by the World Customs Organization);
- (d) New process for gathering consumption data (for Article 7 and Country Programme) on HFCs established;
- (e) Montreal Protocol's Controlled Substances Licensing System expanded to allow control of HFCs;
- (f) NOU and key stakeholders trained on HFC alternative technologies and challenges to implement the Kigali amendment.
- (g) Comprehensive Awareness Campaign on the Kigali Amendment ratification process delivered.

## **F. Budget Description**

10. Following the Paragraph 152(c) of the Decision 79/46, based on the HCFCs baseline level of 23.4 ODP t., the Government of Uruguay requests to the 80<sup>th</sup> Meeting of the Executive Committee the amount of USD\$ 150,000 for the implementation of the above mentioned enabling activities, per the detailed budget below:

<b>No.</b>	<b>Budget description</b>	<b>Budget (US \$)</b>
1.	National Consultant	30,000
2.	Legal Advisor	40,000
3.	Information collection, consolidation and analysis	15,000

4.	Consultation meetings	15,000
5.	Training on technical aspects on HFC alternatives	30,000
6.	Missions	20,000
7.	Sundry	5,000
<b>Total</b>		<b>150,000</b>

11. Of the requested funds UNDP, as lead agency, will implement USD\$ 100,000 and UNIDO, as the cooperating agency, will implement USD\$ 50,000.

### G. Implementation Timeframe

Activities		Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
<b><i>Project Start-up</i></b>																			
1	ExCom Project Approval																		
2	Receipt of Funds																		
3	Project Document Signature																		
4	Consultants Recruitment																		
<b><i>Project Implementation</i></b>																			
5	Data Collection																		
6	Consultation Meetings																		
7	Support to the Ratification Process																		
8	Legal and Policy Fram. review																		
9	Licensing and data collection assessment																		
10	Technical training of NOU and key stakeholders																		
11	Awareness Programme																		

**ANNEX 3**

**Funding requests for the preparation of HFC investments projects in:**

**China (4 PRPs)  
Dominican Republic  
Egypt  
Zimbabwe**

**Country:** People's Republic of China

**Project Title:** Preparation project for refrigerant leakage control research and production line optimization in a mobile air conditioning manufacturer

**Lead Implementing Agency:** UNDP

**Sectors:** Mobile Air Conditioning

**Project Duration:** 12 months

**Preparation cost:** 30,000

**Implementing Agency Support Cost:** US\$ 2,100

**Total Cost of Project to MLF:** US\$ 32,100

**National Coordinating Agency:** Foreign Economic Cooperation Office, Ministry of Environmental Protection (FECO/MEP)

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### **Background and Introduction**

The Kigali Amendment was adopted by the 28<sup>th</sup> Meeting of Parties to the Montreal Protocol on 15 October 2016 in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. The ambitious phase down schedule will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050—avoiding up to 0.5° Celsius warming by the end of the century.

HFC-134a (R134a) is a controlled substance listed in the Annex F under the Kigali Amendment. R134a with Global Warming Potential (GWP) of 1,430, is one of the major refrigerants that contributes to global warming and was used as an alternative to CFC-12 from early 2000's in A5 countries in mobile air conditioning. Due to lack of the strict leakage control policy and measures in most of the A5 countries currently, the consumption of R134a in the MAC servicing sector is much larger than the consumption for the new cars. The improvement of leakage control of MAC products will lead to the reduction of consumption of R134a in the life time of cars.

R1234yf, with zero ODP and very low GWP (4), was introduced as one of the alternatives of R134a in MAC. It has similar thermal properties as R134a and can be used as direct replacement of R134a after slight optimization of the system. As early as 2009, SAE's development project "CRP1234" has concluded that R1234yf can be used as the next generation refrigerant.

However, R1234yf is expensive and is slightly flammable; thus, in order to reduce the cost of using R1234yf as a replacement refrigerant and improve the safety, as well as to improve the efficiency of the refrigeration system, it is necessary to monitor and control refrigerant leakage of MAC system. With foreign air conditioning system, there exists strict regulations on the annual leakage rate of refrigerant. United States requires that the leakage rate for single system not to exceed 40g / year, whilst for double system the leakage rate shall not exceed 60g / year. European regulations are even more stringent; the annual leakage rate shall not exceed more than 15g / year.

Automotive air conditioning refrigerant leakage can be caused by different reasons; it can be divided mainly into external leakage and internal leakage. External leakage occurs mainly in the compressor, the pressure switch connection, the evaporator, the tank and the pipeline connection; internal leakage is mainly caused by the compatibility of the refrigerant and the lubricating oil.

China is now a biggest car market in the world with annual sales over 20 million units, therefore, consumes a considerable amount of R134a both on the servicing and manufacturing sector in MAC.

### **Project Objectives:**

1. To assess the cause and evaluate the current annual refrigerant leakage rate of the mobile air conditioning system.



2. To assess the current level of annual leakage in mobile air conditioning system when R1234yf is used as refrigerant, including both internal leakage and external leakage.
3. Address the cause of refrigerant leakage in automobile air conditioning system through introducing technological improvement.
4. Establish a production line for an optimized automotive air conditioning system; gather demonstration data to propose an industry standards for mobile air conditioning system leakage.

**Project Activities:**

- Establish mobile air-conditioning system refrigerant test protocol and internal leakage test protocol to assess the current rate of refrigerant leakage and cause of the leakage in domestic vehicles, and prepare an assessment report;
- Assess the current rate of leakage, the annual leakage quantities when R1234yf is used as replacement refrigerant in automotive air-conditioning refrigeration system, and identify the cause of the leakage;
- Based on the findings on internal and external leakage, optimize the design of the automotive air conditioning system;
- Establish an optimized production line for the improved automotive air conditioning systems, generate demonstration data as basis to propose R134a and R1234yf Refrigerant Leakage Standard.

**Research Progress and Stage Results**

**Stage 1:**

- Set up automotive air conditioning system refrigerant leakage test protocol and internal leakage test protocol using SAE J2727 standard and JIS-K211 standard to test existing system on external and internal refrigerant leakage level, to assess the existing R134a system refrigerant leakage rate;
- Use R1234yf as replacement refrigerant for R134a and to assess the R1234yf system refrigerant leakage rate;
- Stage results: R134a and R1234yf system refrigerant leakage analysis report.

**Stage 2:**

- Through results of the test protocol performed on the R1234yf system, identify points of refrigerant leakage;
- Through the compatibility test to determine the compatibility of different lubricants and R1234yf refrigerant, determine the quantities of refrigerant leakage and identify the best lubricants compatible with R1234yf refrigerant;
- Optimize the design of R134a and R1234yf air-conditioning system to achieve reduction in the rate of refrigerant leakage;
- Stage results: optimized R134a and R1234yf system design.

**Stage 3:**

- Convert a production line to produce the optimized mobile air-conditioning system and establish a set of design and production specifications;
- Gather demonstration data as basis to propose a national standard on R134a and R1234yf refrigerant leakage;
- Stage results: the transformation and establishment of an optimized mobile air-conditioning system that generates demonstration data, and the finalization of a draft document to establish sector standard.

**Duration of project implementation: 18 month**

**Estimated budget of full project proposal: 1 million**

**Partnership**

Nanjing Xiezhong Auto-Airconditioner (Group) Co., Ltd. will carry out the research and optimization of the production line in this project.

Shanghai Jiaotong University Institute of Automotive Engineering will provide technical support to Nanjing Xiezhong in the preparation and implementation of the project.

**Funding for preparation: USD 30,000**

**COUNTRY:** China

**PROJECT TITLE:** Preparation project for a Demo-Project for converting from HFC-245fa to C5+HFOs in a domestic refrigerator manufacturer in China

**INTERNATIONAL IMPLEMENTING AGENCY:** UNDP

**PROJECT DURATION:** 12 months

**PROJECT COSTS:** US\$ 30,000

**IMPLEMENTING AGENCY SUPPORT COST:** US\$ 2,100 (7%) – UNDP

**TOTAL COST OF PROJECT TO MLF:** US\$ 32,100

**NATIONAL COORDINATING AGENCY:** MEP/FECO OF CHINA

**A. Background**

1. In China, cyclopentane (C5) and HCFC-141b, as the foaming agents, were adopted to replace CFC-11 by the domestic refrigerator industry during the period from 1995 to 2007. Thanks to the implementation of HCFCs phase-out plans in China, HCFC-141b has been almost phased out in the domestic refrigerator sector in recent years. However, HFC-245fa was introduced to replace HCFC-141b to improve the insulation performance to meet the upgrade of energy efficient standard in China. In recent years, the volume of domestic refrigerators adopting HFC-245fa is increased more than 30% annually. It is estimated that approximately 7,000 tons of HFC-245fa is consumed in domestic refrigerator sector in 2016. Now, HFC-245fa, similar with cyclopentane (C5), has become the major foaming agent in the domestic refrigerator industry in China, and it is estimated that the demand of HFC-245fa will be increased rapidly in the future due to the energy efficient standard becoming more and more strict in the future and in the industry development.
2. Since around the year 2011, some domestic refrigerator companies have started to study the use of C5+HFOs foaming technology and commercialized some products in the last 2 years. However, the market share of domestic refrigerator with C5+HFOs is very low in China due to the higher cost compared with HFC-245fa and C5 technology.
3. China is the largest country to produce domestic refrigerator in the world and 70 million units of domestic refrigerators were produced in 2016. The Kigali Amendment of the Montreal Protocol agreed to phase down HFCs will pose a big challenge to China's domestic refrigerator industry due to its huge size and accordingly the huge demand for HFC-245fa.
4. The proposed project is expected to be designed to encourage the use of C5+HFOs technology as foaming agent in domestic refrigerator industry. It will focus on removing or mitigating the barriers for using this non-HFCs technology in this sector. This project will play an exemplary role in phasing-down the huge size HFCs consumed in this sector in China.
5. Moreover, this proposed project is expected to facilitate the country and industries to adopt non-HFCs technologies, as well as to assist the country to explore the efficient management mechanism on phasing down HFCs as foaming agent. This project will provide valuable references for the country and industry to control HFCs to meet the target of the Kigali Amendment in the future.

**B. Objective of the project**

6. Given the situation of China's domestic refrigerator industry and the HFC-245fa consumption, the goals of this proposed project are shown as follow:
  - ✓ To convert one production line for manufacturing domestic refrigerator from using HFC-245fa to adopting C5+HFOs as foaming agent in a beneficial manufacturer;
  - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and share the experiences with other related industries in China and with the Ex.Com.

**C. Brief introduction of the beneficiary company**

7. In the process of preparing this project concept, UNDP had consulted with relevant governmental agencies in China and the association CHEAA on the matter of choosing the beneficiary company. Considering the R&D

capacity and basic capacity on using C5+HFOs technology, it is proposed that Hisense-Kelon Co., Ltd. To be selected to develop the demo production line as conversion activity. Hisense-Kelon Co., Ltd. is part of the Hisense Group, it is established in 1984 and is a major domestic refrigerator manufacturer in China. Hisense-Kelon has 5 manufacturing factories for domestic refrigerator with annual production capacity of 12.6 million units.

8. It is estimated that 1,200 tons of HFC-245fa is consumed by Hisene-Kelon to manufacture domestic refrigerators. Approximately 200 tons of HFC-245fa will be phased out by this project. It should be noted that the data is estimated and the exact data will be collected during the preparation of the full project proposal.

**D. Project activities**

9. To meet the targets of this proposed project, the following activities are designed:
- ✓ A demo project of conversion of the domestic refrigerator production line from HFC-245fa to C5+HFOs as foaming agent in the selected company;
  - ✓ Research on technical formulation of C5+HFOs as foaming agent in domestic refrigerator with cost-effectiveness and tests on insulation performance of C5+HFOs as foaming agent;
  - ✓ Summary of the experiences gained by the demo conversion project, as well as the management on controlling HFC-245fa in domestic refrigerator sector;
  - ✓ Dialog between the domestic refrigerator manufacturers and HFOs suppliers to communicate on the technical demands;
  - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.
10. **Budget for preparing the project document:** USD 30,000 is requested for the preparation of the project document on the Demo-Project for converting from HFC-245fa to C5+HFOs in domestic refrigerator industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting/workshop	7,000
5.	Documentation and information materials	4,000
<b>6.</b>	<b>Total</b>	<b>30,000</b>

**E. Schedule**

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
Project Start-up					
1.	ExCom Project Approval				
2.	Receipt of Funds				
3.	Project/Grant Signature				
Project Implementation					
4.	Information collection and related survey on-site				
5.	Meeting with the beneficial company and related parties				
6.	Draft the project document				

**80<sup>th</sup> ExCom Meeting**  
**UNDP - 2017 Work Programme Amendment**

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
7.	Review process				
8.	Finalize the document and submission to the ExCom				

**COUNTRY:** China

**PROJECT TITLE:** Preparation project for a Demo-Project for converting from HFC-134a to HC-290 in a domestic freezer manufacturer in China

**INTERNATIONAL IMPLEMENTING AGENCY:** UNDP

**PROJECT DURATION:** 12 months

**PROJECT COSTS:** US\$ 30,000

**IMPLEMENTING AGENCY SUPPORT COST:** US\$ 2,100 (7%) – UNDP

**TOTAL COST OF PROJECT TO MLF:** US\$ 32,100

**NATIONAL COORDINATING AGENCY:** MEP/FECO OF CHINA

### **A. Background**

1. At the 28th meeting of the Montreal Protocol, the Parties agreed to phase down HFCs by adopting an amendment of the Protocol naming the Kigali Amendment.
2. In China, HFCs were introduced as alternatives to CFCs and HCFCs in several sectors, such as residential and commercial air conditioner industry, domestic and commercial refrigeration sector. China is the biggest production and consumption country of Ozone Depleting Substances in all A5 countries. It can be estimated that China possibly is in similar situation in terms of HFCs consumption. If there is no plan developed to encourage the industries to the roadmap of non-HFCs technologies at the same time of HCFCs phase-out, it can be predicted that the cost will be multiplied in order to control HFCs consumption in China in future.
3. The domestic freezer sector in China had the production volume of around 19 million units in 2016 and HFC-134a is one kind of refrigerant used in the sector. However, its consumption is not too large as compared with other sectors. It will thus make it a little easier to develop plans to control HFCs when the country does not establish the management system and capacity on handling this issue. Additionally, some companies have the willingness to replace HFC-134a with HC-290 due to HC-290's excellent cooling performance in domestic freezer products in recent years. However, the market penetration of domestic freezer with HC-290 is very low now without the relevant incentive being put in place.
4. Thus, it is the right industry that we can target to develop the project to demonstrate the production line conversion from HFCs to non-HFCs as refrigerants and the relevant management mechanism for the country.
5. This proposed project selected the domestic freezer industry in China to design the suitable activities for the conversion. This project will promote efforts to control HFCs in this domestic freezer industry, and will deliver an important signal for HFCs phase-down trend to fulfill the obligation of the Kigali Amendment.

### **B. Objective of the project**

6. Given the situation of China's domestic freezer and HFC-134a consumption, the goals of this proposed project are set out as below:
  - ✓ To convert one production line for manufacturing domestic freezer from using HFC-134a to adopting HC-290 in the beneficial manufacturer;
  - ✓ To convert one production line for manufacturing compressors from HFC-134a to HC-290 in a selected company;
  - ✓ To collect the information of ICC, IOC and energy efficiency data of the conversion and to identify the barrier of the conversion.
  - ✓ To disseminate the experience and knowledge gained.

### **C. Brief introduction of the beneficiary company**

7. After consultation with MEP/FECO and CHEAA, it is proposed that Qingdao Haier Freezer Co., Ltd. would be selected to develop the demo production line's conversion activity. Qingdao Haier Freezer Co., Ltd., which belongs to the Haier Group, is established in 2001 and is the biggest domestic freezer manufacturer in China. They have 3 manufacturing factories for domestic freezer with annual production capacity of 7 million units.
8. It is estimated that approximately 50 tons of HFC-134a will be phased out by this project. It should be noted

that the data is estimated and the exact data will be collected during the period of preparing the project document.

**D. Project activities**

9. To meet the targets of this proposed project, the following activities are designed:
- ✓ A demo project on the conversion of the freezer production line from HFC-134a to R290 in a selected company;
  - ✓ Accordingly, a demo project of the conversion of the compressor production line from HFC-134a to HC-290 in a selected company;
  - ✓ Research and development on domestic freezer and compressor using HC-290;
  - ✓ Research on revising the related safety standards for using HC-290 in freezer product;
  - ✓ Summary of the experience gained by the demo conversion projects, as well as the management on controlling HFC-134a in the domestic freezer sector;
  - ✓ One workshop will be organized to share the technology experiences gained by the demo projects.

**E. Budget for preparing the project document**

10. USD 30,000 MLF fund is requested for the preparation of the project document for converting from HFC-134a to HC-290 in the domestic freezer industry in China.

No.	Budget description	Budget (US \$)
1.	National experts	8,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	6,000
4.	Meeting	7,000
5.	Documentation and information materials	4,000
6.	<b>Total</b>	<b>30,000</b>

**F. Schedule**

No.	Activities	2017		2018	
		Q3	Q4	Q1	Q2
<b>Project Start-up</b>					
1.	ExCom Project Approval				
2.	Receipt of Funds				
3.	Project/Grant Signature				
<b>Project Implementation</b>					
4.	Information collection and related survey on-site				
5.	Meeting with the beneficial company and related parties				
6.	Draft the project document				
7.	Review process				
8.	Finalize the document and submission to the ExCom				

<b>Country:</b>	People's Republic of China
<b>Project Title:</b>	Demonstration project to convert HFC-23 by-product to valuable organic halides by reaction with hydrogen and carbon dioxide for Liaocheng Fuer New Material Technology Ltd.
<b>Lead Implementing Agency:</b>	UNDP
<b>Sectors:</b>	Production Sector
<b>Project Duration:</b>	12 months
<b>Preparation cost:</b>	US \$30,000
<b>Implementing Agency Support Cost:</b>	US\$ 2,100
<b>Total Cost of Project to MLF:</b>	US\$ 32,100
<b>National Coordinating Agency:</b>	Foreign Economic Cooperation Office, Ministry of Environmental Protection (FECO/MEP)

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## Background and Introduction

The Kigali Amendment was adopted by the 28<sup>th</sup> Meeting of Parties to the Montreal Protocol on 15 October 2016 in Kigali, Rwanda. Under the amendment, countries committed to cut the production and consumption of HFCs by more than 80 percent over the next 30 years. The ambitious phase down schedule will avoid more than 80 billion metric tons of carbon dioxide equivalent emissions by 2050—avoiding up to 0.5° Celsius warming by the end of the century.

Under the Kigali Amendment the Parties to the Montreal Protocol shall report HFC-23 emissions and ensure that HFC-23 emissions generated from production facilities producing HCFCs or HFCs are destroyed to the extent possible using technology approved by the Parties.

Through decision XXVIII/2, the Parties requested the Executive Committee to develop guidelines for financing the phase-down of HFC consumption and production. With regard to the production sector, the costs of reducing emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting it to other environmentally safe chemicals, should be funded by the Multilateral Fund (MLF) to meet the obligations of Article 5 Parties.

At its 79<sup>th</sup> meeting, the Executive Committee invited implementing agencies to submit to the 81<sup>st</sup> meeting proposals for feasible technology demonstration for HFC-23 by-product mitigation or conversion technologies with the potential for cost-effective, environmentally sustainable conversion of HFC-23 (decision 79/47 (g)).

In order to provide the information to the concerned parties and Executive Committee for their kind consideration, UNDP organized a side event during 39<sup>th</sup> OEWG in July of 2017, and invited three technology providers to introduce their recent research in this regard. The side event drew a lot of attention from the stakeholders and promoted technology cooperation and transfer among the interested parties.

China has 32 HCFC-22 production lines which produced 534,930 metric tons in 2015. HFC-23 is destroyed, sold, collected and stored or vented to the atmosphere. In 2015, out of the total amount of 13,604 MT of HFC-23 generated, approximately 45 per cent were destroyed (UNEP/OzL.Pro/ExCom/79/48).

HFC-23 emission is a long-standing and challenge issue to China to fulfill the obligation of the Kigali Amendment, since hundreds of thousands tonnes of HCFC-22 will continue to be produced in China as an important feedstock to produce other chemicals. It's important to demonstrate a sustainable and cost-effective solution to address this issue, other than usual destruction, which is costly in operation and will create wastes in the process.

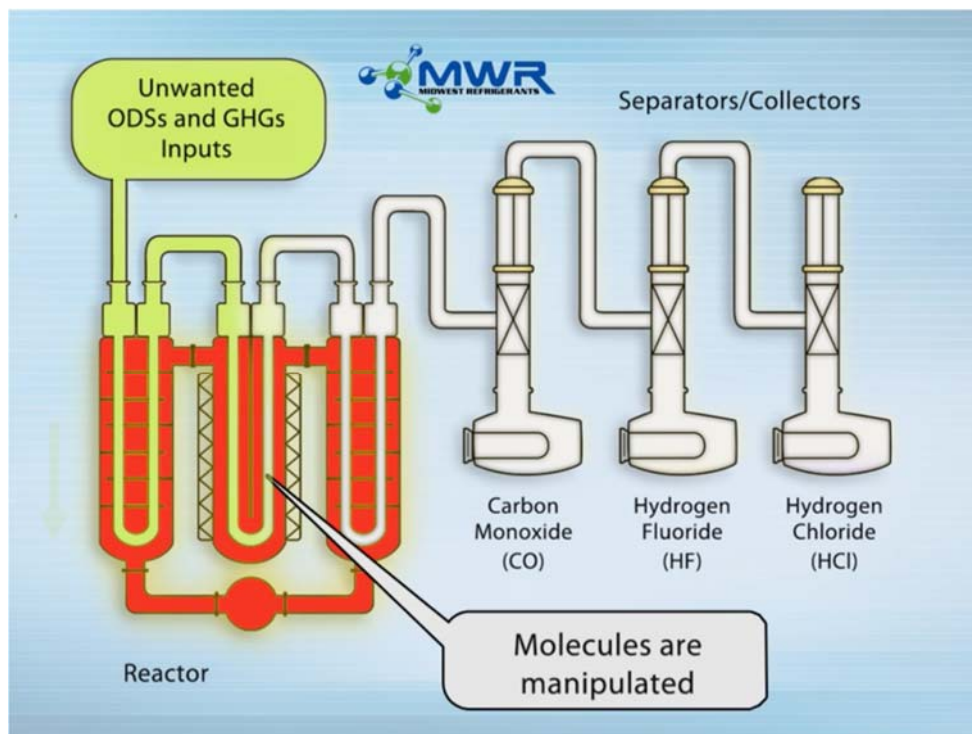
## Conversion Technology in this demonstration project and basic information of the enterprise



Midwest Refrigerants LLC (a U.S. Company) introduced their unique technology at the UNDP side event in Bangkok. This technology is designed to create and recover valuable organic halides from HFC-23 by the Chemical Reaction of Hydrogen (H<sub>2</sub>) and Carbon Dioxide (CO<sub>2</sub>). First, it separates water (H<sub>2</sub>O) to form hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>). The oxygen (O<sub>2</sub>) is reacted with carbon monoxide (CO) to form carbon dioxide (CO<sub>2</sub>). The reaction of the hydrogen and the carbon dioxide irreversibly breaks down the HFC-23 to molecular level. Those molecules are reassembled to form anhydrous hydrogen fluoride and carbon monoxide.



The Midwest technology has already been approved as an irreversible technology by UNEP-TEAP in 2011. It has a two-year history of pilot plant operation and computer modeling to prove the technology on a commercial scale. Midwest has completed engineering of a plant for commercial operations, which is ready for construction. The science has been combined with a business model for the HCFC-22 producers, so that the project will eliminate the HFC-23, delivering valuable outputs that are competitively saleable in the marketplace, which could incentivize the HCFC-22 producers to put their efforts behind it as a sustainable solution, compared to the usual destruction by incineration.



Liaocheng Fuer New Material Technology Ltd. is a large state-owned enterprise established in 1992, located in Liaocheng city of Shandong Province. Liaocheng Fuer New Material Technology Ltd. has a HCFC-22 production line with capacity of 20,000 tons/year. It is estimated to generate about 550 tons HFC-23 by-product. HCFC-22 produced by Liaocheng Fuer New Material Technology Ltd. is only for its own feedstock use to produce TFE (10,000 tons/year). The HCFC-22 production line and its downstream facility was established in 2016. They don't have a dedicated incinerator to destroy HFC-23. After knowing the details of the Midwest technology through FECO and UNDP, Liaocheng Fuer New Material Technology Ltd. has decided to conduct a demonstration project for their plant.

**Objective of the project:**

To demonstrate a cost-effective and environmentally sustainable conversion technology of HFC-23.

**Planned demonstration project activities:**

- Build a 550 metric tons/year capacity unit for Liaocheng Fier New Material Technology Ltd. to convert its HFC-23 by-product to valuable organic halides using Mid-west technology.
- Pilot run the unit at the Midwest U.S. facility and collect the information on the amounts of HFC-23 converted and its products, AHF and CO.
- Prepare a detailed report capturing ICC, IOC, and lessons learnt to be shared with other HCFC-22 producers.

**Estimated budget of full demonstration project proposal:**

The estimated budget of the demonstration unit is about 6 million USD. The request to the Multilateral Fund is estimated to be about US \$2.8 million. The Government of the United States is exploring providing additional funding (amount is to be definite before the 80<sup>th</sup> Ex.Com) to support this demonstration project. Liaocheng Fier New Material Technology Ltd. will provide the co-financing for gap of the capital cost.

**Information to be collected during the preparation stage:**

- (1) Detailed technical performance and capital cost on the establishment of the Mid-west technology with conversion capacity of 550 tons/year of HFC-23;
- (2) An estimation of the value of the products generated by this technology and its economic feasibility study.

**Funding for preparation:** US \$30,000

<b>No.</b>	<b>Budget description</b>	<b>Budget (US \$)</b>
1.	Consultant	9,000
2.	Information collection, consolidation and analysis	5,000
3.	Travels	10,000
4.	Meeting/workshop	3,000
5.	Translation, documentation and information materials	3,000
<b>6.</b>	<b>Subtotal</b>	<b>30,000</b>
7.	Support cost of agency	2,100
<b>8.</b>	<b>Total</b>	<b>32,100</b>

**FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE  
INVESTMENTS PROJECTS**

**COUNTRY: DOMINICAN REPUBLIC**

**PROJECT TITLE:** Preparation of a Project for an HFC-related standalone investment project in the Dominican Republic

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministerio de Medio Ambiente Y Recursos Naturales

**PROJECT INCLUDED IN CURRENT BUSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**AREA:** Commercial Refrigeration Manufacturing

**SECTOR:** RAC- CRM

**SUB-SECTOR:** Stand Alone Self Contained commercial Refrigerators

**NUMBER OF ENTERPRISES:** one (1)

**PROJECT DURATION:** 18 months

**PROJECT COST:** USD 30,000

**SUPPORT COST: (7%)** USD 2,100

**TOTAL COST FOR THE MLF: USD 32,100**

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**Project Summary**

This document describes the proposed arrangements, preparation strategy and budget for the preparation of an HFC-related standalone investment project that will support the Dominican Republic to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-motivation and consequently would need the agreement of the relevant official(s) of the Ministry of Environment and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- c) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

# PREPARATION PROJECT FOR A AN HFC-RELATED STANDALONE INVESTMENT PROJECT IN THE DOMINICAN REPUBLIC

## 1. INTRODUCTION

The Dominican Republic is a Party to the Vienna Convention and the Montreal Protocol. It is fully committed to the phaseout of HCFCs and willing to take a lead in assessing and implementing new HFC phasedown technologies, particularly in refrigeration applications. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment and Sustainable Resources. The process of ratification is expected to take less than one year duration.

The Government of the Dominican Republic is implementing Stages I & II of its HCFCs Phase-out Management Plan (HPMP) and has been

- Meeting the HCFCs compliance targets as per the Montreal Protocol;
- Maximizing climate benefits while phasing-out HCFCs;
- Leapfrogging, as feasible, high GWP alternatives;

## 2. OBJECTIVES OF THIS FUNDING REQUEST

The objective of this document is to request funding for the preparation of an individual investment project for the elimination of HFC in the manufacture of commercial refrigerators;

The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

## 3. OVERVIEW OF THE REFRIGERATION SECTOR

The Ministry of Environment and UNDP commissioned a study on the consumption of ODS alternatives in the Dominican Republic that has been submitted separately to the MFS. There is no manufacture of domestic refrigerators and just two enterpirses that make commercial refrigerators For more information it is referred to the menioned survey.

## 4. TECHNOLOGY

The selection of an alternative, long-term, sustainable refrigerant technology would be seen to be ruled by the following considerations:

- Proven and reasonably mature technology.
- Cost effective conversion.
- Availability of the systems at favorable pricing.
- Critical properties that must to be obtained in the end-product.
- Energy efficiency.
- Reduced carbon footprint.

Five (5) refrigerant options for the vapor compression cycle in all refrigeration and A/C sectors have emerged (TEAP Report, 2010):

- ammonia (R-717)
- carbon dioxide (R-744)
- hydrocarbons and blends (for domestic refrigeration HC-600a)
- hydrofluorocarbons (unsaturated HFCs (HFOs))
- water (R-718)

These five refrigerant options above are in different stages of development or commercialization. HFOs and HCs are now increasingly being applied. Ammonia enjoys growth in sectors where it can be easily accommodated, and for certain—non-DRM—applications. CO<sub>2</sub> equipment is being further developed and a large number of CO<sub>2</sub> demonstration installations have been extensively tested on the market. It may well be that CO<sub>2</sub> will take a substantial part of the commercial refrigeration equipment market. However, the equipment is too bulky to be applied in DRM. Water is used and may see some increase in use in limited applications.

FARCO has identified R-290 refrigerant (propane) as the eventual substitute for the HFC gases employed in its production. However, there are issues pending related to the maximum refrigerant charge (presently 150 gr) and how this may impact the systems for the larger 3 and 4 door refrigerators and low temperature freezers.

## 5. COMPANY PROFILE

Fábrica de Refrigeradores Comerciales, (Farco), SRL, was established in 1980 in the Haina Industrial Zone, just west of Santo Domingo, with the purpose of offering regional customers stand-alone self-contained commercial refrigerators. The company is able to provide competitive products and services better adapted to the specific needs of the regional markets.

FARCO has a dominant share in the local Dominican market, catering to the institutional sectors and pioneering the development of refrigerated merchandising techniques. Our company has years of experience in the regional export markets serving Haiti and numerous Caribbean Islands such as Puerto Rico, Jamaica, Trinidad & Tobago as well as Central America and the United States.

Farco equity is 98% Dominican owned.

The product lines manufactured by Farco include Glass Merchandisers, Vertical and Horizontal Beverage Coolers, Reach-In Refrigerators and Freezers, Refrigerated Food Preparation Tables, Refrigerated Work Top and Under counter Units, Pizza Preparation Tables, Back Bar Coolers, Ice Merchandisers, Draft Beer Dispensers, Horizontal Freezers, Sub-Zero Beer Coolers, etc. More information is available on its website at [www.farcofogel.com.do](http://www.farcofogel.com.do)

## 6. AMOUNT AND TYPE OF HFC TO BE PHASED OUT

	2012	2013	2014	2015	2016
R-134a	3,169.44	3,168.84	3,169.44	3,169.44	4,753.56
R-404a	174.23	98.00	500.91	65.34	206.90
Total	3,343.67	3,266.84	3,670.35	3,419.90	5,477.70

Year 2017 production is 60% above that of 2016.

## 7. BUDGET

No.	Budget description	Budget (US \$)
7.	International Experts	9,000
8.	National Consultant	8,000
9.	Information collection, consolidation and analysis	5,000
10.	Meetings, Missions	5,000
11.	Project Proposal	3,000
	<b>Total</b>	<b>30,000</b>

### A) Implementation Timeframe

Activities	2017		2018										
	11	12	1	2	3	4	5	6	7	8	9	10	11
<b><i>Project Start-up</i></b>													
1	ExCom Project Approval												
2	Receipt of Funds												
3	Project Document Signature												
4	Consultants Recruitment												
<b><i>Project Implementation</i></b>													
5	Data Collection												
6	Consultation Meetings												
7	Draft the project document												
8	Peer Review												
9	Submission to the ExCom												

**FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE  
INVESTMENTS PROJECTS**

**COUNTRY: EGYPT**

**PROJECT TITLE:** Elimination of HFC in the manufacture of PU Foam

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** N/A

**NATIONAL COORDINATION AGENCY:** Egyptian Environmental Affairs Agency (EEAA)

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**AREA:** Manufacturing

**SECTOR:** PU Foam

**SUB-SECTOR:** Panels, Spray

**NUMBER OF ENTERPRISES:** one (1)

**PROJECT DURATION:** 12 months

**PROJECT COST:** USD 30,000

**SUPPORT COST: (7%)** USD 2,100

**TOTAL COST FOR THE MLF: USD 32,100**

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**Project Summary**

This document describes the proposed arrangements, preparation strategy and budget for the preparation of the HFC-related standalone investment projects that will support Egypt to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-motivation and consequently would need the agreement of the relevant official(s) of the Egyptian Environmental Affairs Agency (EEAA) and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- b) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- c) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

## PREPARATION PROJECT FOR A AN HFC-RELATED STANDALONE INVESTMENT PROJECT IN EGYPT

### 8. INTRODUCTION

Egypt is a Party to the Vienna Convention and the Montreal Protocol. It is fully committed to the phaseout of HCFCs and willing to take the lead in assessing and implementing new HFC phasedown technologies, particularly in the foam sector—as it did for CFCs in 1992 when it submitted and completed the first foam sector investment projects ever funded by the Multilateral Fund for the Implementation of the Montreal Protocol (MLF). Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment and is expected to be deliberated in the Cabinet before approval by the Parliament. The process of ratification is expected to take less than one year duration.

Ministerial Decree No. 77 of 2000 issued by Egypt's Ministry of State for Environmental Affairs prohibits the importation of all ODS, including HCFCs, without a permit issued by the Egyptian Environmental Affairs Agency (EEAA). In addition, Decree No. 139 of 2003 issued by the Ministry of Trade and Industry bans imports of new and used equipment containing ODS.

Minister of State for Environmental Affairs issued Decree No. 80 of 8<sup>th</sup> April, 2013 for the re-establishment of the National Ozone Committee with the mandate of assisting the Egyptian Environmental Affairs Agency in the implementation of Egypt's obligations, by selecting the mechanism to regulate the import and export of quantities of ozone-depleting controlled substances to achieve schedules of gradual reduction, in order to ensure verification of compliance by Egypt with the provisions of the Montreal Protocol to protect the ozonelayer.

The quota system for Egypt is unique as compared to most other countries. As per Article 4 of the National Law for Competition Protection and Combating Monopoly Practices (Law no. 3 of 2005 and its 2010 amendment), no company can have more than 25% of the market share, and as per Article 6, Agreements or contracts between competing Persons in any relevant market are prohibited if they cause any of the following: b) Dividing product markets or allocating them on ground of geographical areas, distribution centers, type of customers, goods, market shares, or seasons or periods of time. In view of this, the National Ozone Committee sets the maximum quota allowed for Egypt for the year based on the HPMP Agreement. Imports are approved on a first come first served basis, with a limitation of 2 containers/ISO tanks per approval, and next approval for the same importer is given after showing proof of import of previous shipment. However, manufacturers are excluded from the 2-container limitation with the understanding that growth over the years is not allowed.

The NOU maintains a database of maximum import allowed by the country for the year, as set by the National Ozone Committee. As pre-shipment approval is given to an importer, the quantity is noted. After goods are imported, the importer provides all documentation to NOU and receives the clearance letter advising Customs that the consignment may be released. This quantity is noted in the database, and the balance from the national quota is calculated. If the total of the pre-shipment permits issued reaches the maximum of the quota, no additional pre-shipment permits are issued until the actual import data is available and checked if there is any balance left. This situation has not happened till date as imports have been less than the available quota for the year.

The Government of Egypt is implementing the Stage I & II of its HCFCs Phase-out Management Plan (HPMP) and has:

- Meeting the HCFCs compliance targets as per the Montreal Protocol;
- Maximizing climate benefits while phasing-out HCFCs;
- Leapfrogging, as feasible, high GWP alternatives;
- Synchronizing with relevant parts in the national development;
- Minimizing impacts on the consuming sectors and end users;
- Involving all relevant stakeholders and ensure ownership of activities; and



- Adopting robust, but doable, policies and work-plans under the HPMPs

## 9. OBJECTIVES OF THIS FUNDING REQUEST

The objective of this document is to request funding for

- the preparation of an individual investment project for the elimination of HFC in the manufacture of PU Foam;
- the survey of the PU foam industry on the use of any other use of HFCs.

The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

## 10. OVERVIEW OF THE PU FOAM SECTOR

There is currently no information on the consumption of HFCs in Egypt due to the lack of any surveys in this area. The polyurethane foam (PU) is, however, well surveyed—the last time as part of the HPMP-2 which contains an HCFC-141b phaseout plan for the entire PU foam industry. From previous projects it's known that at least one PU foam company uses HFCs.

The PU foam industry plays a significant role in the economy of Egypt. The key areas of application in Egypt are in rigid and, to a lesser degree, integral skin products, including domestic refrigerators and freezers, commercial refrigeration equipment, insulated truck bodies, insulation panels for diverse applications, electric water heaters thermoware products, spray foam in construction and other insulation applications, decorative articles and window frames, pour-in-place applications and automotive, furniture and other applications

Apart from the domestic refrigeration manufacturing, Egypt's foam manufacturers heavily depend on chemical and technology supply through system houses. These provide ready to use PU systems consisting of a component "A" (a fully formulated polyol system or FFS) and a component "B" (isocyanate, in this case MDI). The two components, when brought in contact and thoroughly mixed, create a foamed polymer with the desired product properties. They are able to incorporate a large range of blowing agents but leave the choice generally to the customer/end-user. Those system houses, however, not preblend cyclopentane, the phaseout compound of many Egyptian PU foam enterprises.

## 11. TECHNOLOGY

Current HFC use in A5 countries is relatively small and mostly restricted to co-blending. High price is the motivator to stay as much as possible away from HFCs. However the use as co-blowing agents to reduce density in HCO blowing foams is rising sharply as the reduction in density makes up the higher price.

There are currently three HFCs used in foam applications. Following table includes the main physical properties of HFCs can be used in Foams:

**Table-1 – Main Properties of HFCs used in PU foams**

Parameter	HFC-134a	HFC-245fa	HFC- 365mfc
Chemical Formula	CH <sub>2</sub> FCF <sub>3</sub>	CF <sub>3</sub> CH <sub>2</sub> CHF <sub>2</sub>	CF <sub>3</sub> CH <sub>2</sub> CF <sub>2</sub> CH <sub>3</sub>
Molecular Weight	102	134	148
Boiling point (°C)	-26.2	15.3	40.2
Gas Conductivity (mWm <sup>0</sup> K at 10 °C)	12.4	12.0 (20 °C)	10.6 (25 °C)
Flammable limits in Air (vol. %)	None	None	3.6-13.3
TLV or OEL (ppm)	1,000	300	Not established
GWP (100 y)	1,410	1,020	782
ODP	0	0	0

## 12. HFC CONSUMPTION

As mentioned, the use of HFCs in foam applications is very small. While this project preparation plan will review HFCs use in this industry in depth, preliminary search showed at least one company is using it in production and a few others just in an early trial stage. The search did not include refrigeration applications, however, widespread as of yet not surveyed.

### 13. COMPANY PROFILE

The Government of Egypt submitted in November 1996 a proposal to phaseout the remaining use of CFCs in the Egyptian foam industry. This proposal was approved in May 1997. The project included a component to support the Army’s Construction Factory in its phaseout CFC phaseout program. (EGY/97/G66 – Phaseout of the Remaining ODS Consumption in the Foam Sector, Sub-project Army Factory). The company produces PU panels an PU spray/PIP foam. The challenge at that time was that the army was not allowed to use interim technologies nor flammable blowing agents. The limited choice led to the use of HFC-134a which was directly injected.

The intended technology is the use of liquid HFOs but this needs first to be discussed and checked against current safety policies.

The Army factory undertakes construction projects for the Egyptian army. The PU foam activities focuses on sandwich PU panels for construction applications such as cold stores, prefab housing for defense and other uses. Spray/PIP foam is used for the same purpose as well for repair activities. The factory is located at the outside of Cairo, Egypt.

### 7. BUDGET

No.	Budget description	Budget (US \$)
8.	International Experts	9,000
9.	National Consultant	8,000
10.	Information collection, consolidation and analysis	5,000
11.	Meetings, Missions	5,000
12.	Project Proposal	3,000
	<b>Total</b>	<b>30,000</b>

### 8. Implementation Timeframe

Activities	2017		2018										
	11	12	1	2	3	4	5	6	7	8	9	10	11
<b><i>Project Start-up</i></b>													
1	ExCom Project Approval	■											
2	Receipt of Funds		■										
3	Project Document Signature		■										
4	Consultants Recruitment		■	■									
<b><i>Project Implementation</i></b>													
5	Data Collection			■	■	■	■	■					
6	Consultation Meetings			■	■	■	■	■	■				
7	Draft the project document						■	■	■	■			
8	Peer Review							■	■	■	■		
9	Submission to the ExCom									■	■	■	

**FUNDING REQUEST FOR THE PREPARATION OF HFC-RELATED STANDALONE  
INVESTMENTS PROJECTS**

**COUNTRY: ZIMBABWE**

**PROJECT TITLE:** Elimination of HFC-134a in the manufacture of domestic refrigerators

**LEAD IMPLEMENTING AGENCY:** UNDP

**COOPERATING AGENCY:** n/a

**NATIONAL COORDINATION AGENCY:** Ministry of Environment, Water & Climate

**PROJECT INCLUDED IN CURRENT BUSSINESS PLAN:** No

**ELIGIBLE CONSUMPTION:** n/a (HFCs)

**AREA:** Manufacturing

**SECTOR:** Refrigeration and Air Conditioning

**SUB-SECTOR:** Domestic Refrigeration

**NUMBER OF ENTERPRISES:** one (1)

**PROJECT DURATION:** 12 months

**PROJECT COST:** USD 30,000

**SUPPORT COST: (7%)** USD 2,100

**TOTAL COST FOR THE MLF: USD 32,100**

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**Project Summary**

This document describes the proposed arrangements, preparation strategy and budgets for the preparation of the HFC-related standalone investment projects that will support Zimbabwe to contain the HFC consumption and facilitate the early implementation of the Kigali Amendment to the Montreal Protocol.

Such arrangements would be implemented taking into consideration:

- a) The need to reflect national context and priorities, national policies and country-drivenness and consequently would need the agreement of Ministry of Environment and the national stakeholders to the investment project proposal;
- b) To facilitate seamless early implementation of the Kigali Amendment;
- c) To draw upon the lessons learnt from the project preparation phase and the sector analysis that will support it;
- d) To be dynamic and evolving, and to be open for revisions and adaptation as necessary in response to evolving situations during the preparation process.

## Background

1. The Government of Zimbabwe acceded to the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that deplete the Ozone Layer, and had ratified all the previous Amendments to the Montreal Protocol. Currently, the country is taking significant steps towards the ratification of the Kigali Amendment. The ratification process has already been initiated by the Ministry of Environment, Water and Climate and is expected to be deliberated in the Cabinet before approval by the Parliament. The process of ratification is expected to take less than one year duration.
2. The Government of Zimbabwe has successfully phased-out CFCs in the Refrigeration and Air-conditioning (RAC) sector, Methyl Bromide in the agricultural sector (tobacco seedlings, cut flowers and stored grain fumigation), Carbon Tetrachloride and Methyl Chloroform in the solvents sector and Halons in firefighting. Since 2004, the Government of Zimbabwe has been implementing a licensing system for the control of ODS imports. The ODS regulations were reviewed in 2011 to ban imports of CFCs, CTC and Halons and again in 2016 to ban imports of Methyl Bromide and Methyl Chloroform in accordance with the phase out schedules under the Montreal Protocol. The country has a well-established and enforceable Quota and Licensing system to control the consumption of HCFCs in the RAC sector. The National Ozone Unit implements the quota system in coordination with the Customs Officers who are stationed at all ports of entry across the country. Environmental Officers assist the NOU in enforcing the ODS regulations with regards to the use, storage, handling and disposal of HCFCs and HCFC based appliances.
3. The Government of Zimbabwe is implementing the Stage I of its HCFCs Phase-out Management Plan (HPMP) and has:
  - (a) Complied with the 2013 HCFC freeze requirements;
  - (b) Complied with the 2015 10% HCFC reduction in consumption;
  - (c) Has timely reported Article 7 data to the Ozone and MLF Secretariats; and
  - (d) Has conducted several training workshops for refrigeration technicians and Customs officers
4. Customs Officers at all ports of entry were trained in controlling and monitoring ODS trade. The training includes the detection of smuggling schemes, identification of ODS consignments, labeling and packaging, use of Customs checklists and use of refrigerant identifiers. A total of sixteen (16) refrigerant identifiers were distributed to all ports of entry and this has resulted in improved HCFC controls and a number of seizures of illegally imported HCFC consignments which demonstrates the very functionality of the system.
5. Refrigeration service technicians have been trained in Good Refrigeration Practices and safe use of HCFC alternatives. The training workshops have been conducted at all the Technical Colleges and within specialized training centres of important RAC service companies. This has resulted in the adoption of CFC and HCFC alternatives in the RAC sector. Zimbabwe has well established refrigeration appliances manufacturing companies that export equipment to neighboring countries. The consumption of HCFCs and HFCs is significantly higher compared to most of the developing countries within the region. The HCFC baseline level is 17.8 ODP tonnes. The most commonly used HCFC is R-22.

**A.1) Preliminary analysis of the Domestic Refrigeration Manufacturing Sub-Sector**

6. The ODS Alternatives survey was conducted in response to decision XXXVI/9 which provided for Article 5 countries to receive financial assistance from the MLF to carry out surveys to better understand their historical consumption and predict future consumption trends of ODS Alternatives in different sectors and sub-sectors. The survey was conducted in accordance with the MLF guidelines.
7. The use of refrigeration and air conditioning equipment is expanding as the people of Zimbabwe gradually improve their socio-economic status in line with global trends. Most households in urban centers have refrigeration appliances and those in medium to low density suburbs have installed air conditioning units. Most of the refrigeration and air conditioning appliances depend on pure and blended HFCs, with some very limited domestic refrigerators being imported using HC-based refrigerants.
8. The domestic refrigeration sub-sector in Zimbabwe is dominated by R-134a refrigerant which is used in servicing and manufacturing of most standalone units, such as fridges and freezers. Except for 2012, which had a high usage of R-134a in manufacturing of domestic appliances, there was a steady rise from 2013 to 2015 in the use of R-134a from 4.4 MT to nearly 7 MT in manufacturing alone. The increase in usage of this refrigerant has been caused by its availability at low cost and availability of R-134a based appliances locally from manufacturing companies and from neighboring countries.
9. The use of R-600a in domestic refrigeration is slowly gaining momentum. Most imported domestic fridges are charged with R-600a and this results in pressure over servicing and import of HCs. In 2015, 0.9 MT of R-600a was imported and this is expected to rise in the coming years as the needs HC refrigerants increase.

**B) Preliminary HFCs Consumption Data**

**Table 1 – HFCs Consumption per Sector (metric tonnes)**

Substance	2012				2013				2014				2015			
	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting	RAC		PU Foam	Fire fighting
	Man.	Serv.			Man.	Serv.			Man.	Serv.			Man.	Serv.		
HFC-134a	16.7	11.6			6.23	24.17			10.2	22.88			11.37	24.11		
HFC-227ea/365mfc				0.6				0.6				0.64				0.65
R-404A	2.68	6.94			2.75	10.95			2.77	19.98			2.98	26.82		
R-407C		1.36				1.45				2.37				2.48		
R-410A		42.96				45.06				46.15				48.10		
R-507A		0.54				0.82				1.09				1.64		
HFO-1234yf		0.023				0.027				0.031				0.036		
HC-290		0.33				0.54				0.30				0.75		
HC-600a		0.38				0.58				1.16				1.09		
Pentanes (C, N, I)			0.0				0.0				0.0				24.6	
R-744		3.10				3.50				3.80				4.50		
R-717		15.40				15.50				15.80				16.20		

Source: ODS Alternatives Survey (2017)

### C) Objective of this Funding Request

10. The objective of this document is to request funding for the preparation of an Investment Project for the elimination of HFC-134a in the manufacture of domestic refrigerators. The HFCs-related Standalone Investment Project will be prepared and submitted to the ExCom appreciation following the guidelines established under the Decisions 78/3(g) and 79/45.

### D) HFCs-related Standalone Investment Project Preparation Strategy

#### C.1) Company Profile:

11. In 1966, Capri Group Limited it started its refrigerator and chest freezer manufacturing under the brand “Atlantic”, later renamed into “Capri” brand name as it is known now. Since that time, Capri has continued to upgrade its manufactured range of 10 models consisting of refrigerators and chest freezers that offers consumers a variety of choice to suite the new modern home finishes. Never losing sight of the world market Capri makes sure that its’ models and designs remain competitive and in line with current market trends and demand and by investing in state of the art machinery Capri will continue to do just that.

#### C.2) Information to be collected during the preparation process:

- Detailed company profile, ownership and commercial/financial data;
- Technical information (confirmation) on consumption of HFCs, number of production lines, evaluation of production process, outputs and profile of appliances produced;
- evaluation on potential alternative technologies to HFC-134a, consultation process with Government and Company on reconversion process and technology choice;
- preparation of full standalone project proposal. Peer review and submission to the ExCom.

### E) Budget Description

No.	Budget description	Budget (US \$)
1.	International Experts	9,000
2.	National Consultant	8,000
3.	Information collection, consolidation and analysis	5,000
4.	Meetings, Missions	5,000
5.	Project Proposal	3,000
	<b>Total</b>	<b>30,000</b>

### F) Implementation Timeframe

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